The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 1748.—Vol. XXXIX. LONDON, SATURDAY, FEBRUARY 20, 1869. {STAMPED ....SIXPENCE, UNSTAMPED--FIVEPENCE

MR. JAMES CROFTS, STOCK AND SHAREBROKER,
No. 1, FINCH LANE, CORNHILL.
(Established 1842.)

Mr. CROFTS transacts business in the way of PURCHASE or SALE of every description of stocks, but particularly BRITISH MINES, at net prices. All orders meet with the utmost punctuality, and advice given as to the nature and eligibility of INVESTMENTS when required.

The market is good for all mines producing tin, and amongst these may be stated—EAST WHEAL LOVELL, GREAT WHEAL VOR, PROVIDENCE, TRUMPET CONSOLS, WHEAL KITTY (St. Agnes), NEW WHEAL LOVELL, EAST NEW LOVELL, PEDN-AN-DREA, WHEAL UNY. Other mines (paying dividends) are—COOK'S KITCHEN, EAST CARADON, GREAT LAXEY, HERODSFOOT, MARKE VALLEY, WEST CHIVERTON, WEST SETON, WHEAL MARY ANN, WHEAL BASSET, WHEAL SETON.

*** All the above are good to buy.

Mr. CROFTS has shares for sale in a TIN MINE which is reported by the agent as capable of paying enormous profits within three months. The shares are very moderate in price, and must rise to more than treble their value very shortly.

MR. JOHN BUMPUS, 44, THREADNEEDLE STREET,
has FOR SALE the following shares, free of commission :—

50 Anglo-Brazilian, 9s.
10 Brynpostig, £1½.
5 Cwm Erfin, £13.
35 Carn Camborne, 12s 3
30 Crebor, 9s.
10 Chiverton, £2⅝.
50 Chontales, 24s.
50 Drake Walls, 18s.
35 Don Pedro, £3 16s pm.
10 East Caradon, £8⅞.
30 E. Grenville, £3¾.
25 E. Carn Brea, 6s. 9d.
50 E. Rosewarne, 5s. 6d.
10 East Lovell, £8½.
25 Frank Mills, £3¼.
100 Frontino, 9s. 9d.
15 Gonamena, 21s. 6d.
10 Gt. Retallack, £2 8 9
50 General Brazilian, 9s.
15 Great Laxey, £19 3s 9
10 Gt. No. Dowus, £2½.
30 Gt. No. Laxey, 32s. 9d
20 Marke Valley, £9½.
25 No. Treskerby, 18s 6d
10 North Retallack, £3.
15 New Lovell, £2⅝.
10 North Levant, £11⅛.
20 No. Wh. Crofty, 28s.
35 Port Phillip, £2 0s 6d
50 Prince of Wales, 23s 9
50 Royalton, 29s.
5 St. John del Rey, £19¼
30 South Darren, 33s. 9d.
50 Sao Vicente, 12s.
30 So. Condurrow, 22s 3d
10 Tincroft, £17½.
100 Taquaril, 13s. 6d.
5 Wh. Mary Ann, £21.
50 W. Godolphin, 23s 9d
15 West Gt. Work, £2¼.
25 Wh. Grenville, £2¼.
50 Mary Florence, 18s 6d
50 Yudanamuta., £2 1s.

MR. WILLIAM WARD,
STOCK AND SHAREDEALER,
No. 29, THREADNEEDLE STREET, LONDON, E.C.

MESSRS. WILSON, WARD, AND CO.,
STOCK AND SHAREDEALERS,
16, UNION COURT, OLD BROAD STREET, LONDON, E.C.

MR. THOMAS SPARGO, STOCK AND SHAREDEALER,
224 & 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C.

JOHN RISLEY, (SWORN) STOCK AND
SHAREBROKER, 48, THREADNEEDLE STREET, LONDON, E.C.
Bankers: London and Westminster, Lothbury.

MR. S. GOMPERS, JUN., STOCK AND SHAREDEALER,
3, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
Mr. GOMPERS strongly advises the purchase of East Caradon shares.

MR. JAMES HUME, STOCK AND SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Has BUSINESS in—

5 West Chiverton, £55.
20 Chiverton, £27⅛.
20 East Caradon, £9.
50 Prince of Wales, 24s 6d
50 Drake Walls, 19s.
50 North Treskerby, 19s.
20 East Grenville, £3⅞.
20 Uny, £3¾.
10 East Lovell, £8¼.
20 West Jane, 10s.
20 Grenville, 46s.
50 Chontales, £1¼.
50 Taquaril, 6s. pm.
50 Don Pedro, £3¾.
100 Crebor, 8s.

Mr. J. HUME'S "Circular" for February is now ready, price 6d., containing reliable information on several mines at present occupying attention, and is a safe guide to investors.

WHEAL MARY FLORENCE.—This mine is rapidly improving, and the results are certain. For further particulars apply to J. H.
Bankers: The London Joint-Stock Bank.

MR. J. H. COCK, STOCK AND MINING SHAREDEALER,
74, OLD BROAD STREET, LONDON, E.C.
Fifteen years' experience in Cornwall and London.

SPECIAL BUSINESS in Botallack, Boscean, South Condurrow, North Treskerby, Margaret, Rosewall Hill, and New Lovell.

J. H. C. should be consulted on any of the above mines at once.

MR. E. J. BARTLETT, STOCK AND SHAREDEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS in West Godolphin, Summer Hill, North Pool, South Condurrow, South Merllyn, New Lovell, Great South Chiverton, South Darren, North Levant, Ding Dong, Wheal Jane, West Great Work, Bryn Gwiog, East Rosewarne, and East Lovell.

Mr. E. J. B. begs to call particular attention to the WEST GODOLPHIN MINE, and is prepared to give full and reliable information as to its present state and its prospects for the future. There cannot be any doubt but that this mine will prove a very valuable property. Holders should increase rather than diminish their interests.

SOUTH MERLLYN.—Attention is directed to the report of the agent published this day in these columns.

BUYER of 95 West Godolphin shares.

Holders of Stock difficult of sale in the open market may find purchasers on application to the above.

MR. JOHN MOSS, STOCK AND SHAREDEALER,
ST. MICHAEL'S CHAMBERS, 42, CORNHILL, E.C.
Business as BUYER or SELLER in Chontales, Don Pedro, General Brazilian, and Taquaril Gold shares.
Bankers: City Bank, Finch-lane, E.C.

MR. J. B. REYNOLDS, STOCK AND SHAREDEALER,
ETHELBURGA HOUSE, BISHOPSGATE STREET WITHIN, E.C.
Established Eleven Years.
Bankers: City Bank, London, E.C.

MR. C. A. POWELL, STOCK AND SHAREDEALER,
No. 1, PINNER'S COURT, OLD BROAD STREET, LONDON, E.C.
Business transacted as BUYER or SELLER in the shares of the Leading Dividend and Progressive Mines at market prices.

CHONTLES and ST. JOHN DEL REY.—Mr. POWELL has substantial reasons for recommending the sale of these shares. Further information can be supplied on application. References exchanged.
Bankers: City Bank, Finch-lane.

MATTHEW GREENE, STOCK AND SHAREDEALER,
1, ST. MICHAEL'S HOUSE, CORNHILL, LONDON, E.C.

TAMAR VALLEY SILVER-LEAD.—I still recommend the purchase of these shares. The mine is progressing fast towards a highly remunerative state. See reports in this day's Journal.

M. G. is now on a tour of inspection of the mines in the Devon Consols district, and will return on or before Friday, the 26th inst.
BUYER of New Clifford shares.

MR. WILLIAM MARLBOROUGH, 1, GREAT ST. HELEN'S,
BISHOPSGATE STREET, LONDON, E.C. (Established 14 years), has FOR SALE the FOLLOWING SHARES, at net prices :—

50 Anglo-Brazilian, 10s 9
10 Cwm Darren, £30
20 Chontales, £1 5s.
20 Chiverton, £2⅝.
10 Chiv. Moor, £4¼.
20 Don Pedro, £3 13s pm.
40 Drake Walls, 18s. 6d.
10 East Caradon, £8 18 6
5 East Lovell, £8 3s 9d.
20 E. Grenville, £3 16s 3
10 Frank Mills, £3 17s. 6
50 Frontino, 9s. 3d.
5 Great Laxey, £19½.
20 Gt. No. Laxey, 31s.
25 Gt. Retallack, £2 6 3
50 Gt. So. Tolgus, 15s.
5 Great Vor, £12¼.
5 Marke Valley, £9 3s 9
30 New Lovell, £2¾.
20 No. Treskerby, 19s 6d
100 Princess Wales, 3s 9d
50 Prince of Wales, 23s 6
1 Providence, £36½.
10 Rose and Chiverton.
50 South Merllyn, 20s 9d
20 South Darren, 33s.
50 So. Condurrow, 23s 6d
50 Taquaril, 4s. 9d. pm.
1 West Chiv., £54¾.
1 West Seton, £197½.
20 Wheal Grenville, 44s.
3 Wh. Mary Ann, £21.
20 W. Godolphin, 24s.
10 Wheal Uny, £3 11s 3d
1 Wheal Seton, £74.
50 Mary Florence, 20s.

MR. GEORGE BUDGE, STOCK AND SHAREDEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 20 years), is a SELLER at net prices of :—

50 Prince of Wales, 22s. 6d.; 40 East Grenville, £3 7s.; 50 Wheal Grenville, 36s.; 15 Cwm Darren, £29¾; 3 West Tolgus, £44; 100 East New Wheal Lovell, 8s. 6d.; 90 Chiverton, £3; 25 Rose and Chiverton; 100 General Brazilian, 9s. 6d.; 35 Drake Walls, 17s.; 90 Lovell Consols; 80 Gwydyr Park, 4s.; 100 Taquaril Gold, 4s. 9d. prem.; 50 Wheal Mary Florence, 19s.; 20 Maes-y-Safn, £20; 100 West Tresayne, 10s.; 150 Glan Alun, 10s. 6d.; 80 Camborne Vean, 10s.; 20 Gawton, 8s. 6d.; 25 Penhalls, £5⅜; 50 Royalton, 28s. 6d.; 100 Frontino, 9s.; 5 West Chiverton, £53; 20 Great Laxey, £20; 3 Devon Great Consols; 50 East Carn Brea, 8s. 6d.; 30 Gonamena, 20s.; 100 West Kitty; 5 Tincroft; 50 North Jane.

CORNISH AND FOREIGN MINES—
TO SHAREHOLDERS AND OTHERS.

PETER WATSON'S "WEEKLY MINING CIRCULAR AND SHARE LIST—SYNOPSIS OF CORNISH AND DEVON MINES," of Friday, Feb. 19, No. 520, Vol. XI., price 6d. each copy, forwarded on application, contains information on the following mines :—

Wheal Trelawny.
West Drake Walls.
Chiverton.
North Downs.
Great North Laxey,
Great Western.
St. Ives Consols.
Chontales.
Great South Tolgus.
Prince of Wales.
Wheal Buller.
Botallack.
Wheal Grenville.
West Wheal Seton.
Don Pedro.

INVESTMENT OR SPECULATION.—A SELECTED LIST OF RAILWAYS, BANKS, MINES, COLONIAL SECURITIES, FOREIGN GOVERNMENT BONDS, &c., forwarded to *bona fide* investors on application, in addition to the high rate of interest many of the above are paying, there is now every probability of a great rise in market value.

PETER WATSON, STOCK AND SHAREDEALER,
79, OLD BROAD STREET, LONDON
(three doors only from Hercules-passage, entrance to the Stock Exchange).
Twenty-four years' experience.
(Two in Cornwall and Twenty-two in London.)
Bankers: The Alliance Bank, and the Union Bank of London.
References given and required (when necessary) in all the principal towns of the United Kingdom.

THE LONDON DAILY RECORD—STOCK AND SHARE LIST—STOCK EXCHANGE SECURITIES. Published every evening at 5 o'clock. It contains the latest prices of railways, banks, mines, foreign stocks and bonds, financial, insurance, and miscellaneous shares, remarks on the daily rise and fall in prices, with advice as to purchase and sales. Annual subscription, £1 1s.; by post, £2 5s.; monthly subscription—by post, 4s.; single copy, 1d.; by post, 2d.
PETER WATSON, Stock and Sharedealer, 79, Old Broad-street, London.

MR. EDWARD COOKE,
STOCK AND MINING SHAREDEALER, 76, OLD BROAD STREET (and Mining Exchange), LONDON, E.C.

Mr. COOKE still advises the purchase of Great Western, Great Wheal Vor, East New Lovell, New Wheal Lovell, Prince of Wales, and Frank Mills shares, feeling confident of a considerable advance in price.

BUYER of Frank Mills, New Wheal Lovell, and West Great Work shares, at market prices.
References given.
Price-list sent free on application.
Bankers: Alliance Bank.

MR. W. H. CUELL,
No. 42, CORNHILL, LONDON, E.C.

MR. WILLIAM SEWARD, STOCK AND MINING SHARE BROKER, 19, THROGMORTON STREET, LONDON, E.C.
Every description of shares BOUGHT and SOLD at the best market prices.

MR. T. ROSEWARNE, 81, OLD BROAD STREET,
LONDON, E.C.
T. R. has BUSINESS in the following mines, at close market prices :—

Bedford United.
Chiverton.
Chiverton Moor.
Cook's Kitchen.
East Caradon.
East Carn Brea.
East Grenville.
East Lovell.
Frontino and Bolivia.
Great Wheal Vor.
Marke Valley.
North Treskerby.
New Lovell.
Prince of Wales.
Pedn-an-drea.
South Crofty.
Tincroft.
West Caradon.
West Chiverton.
Wheal Grenville.
Wheal Seton.
Wheal Uny.
Kitty (St. Agnes).

Parties interested in mining, and who wish to be guided right, should consult T. R., he not only having been a practical miner, but has been in the share market for thirteen years. Those who have hitherto consulted me have done well, and I never saw a better opportunity than the present to make money if properly employed. Shares can be exchanged to great advantage.

T. R. can recommend three mines which are sure to have a great rise this year.

T. R. should be consulted at once respecting Chontales and Prince of Wales shares.

T. R. is a SELLER of Chontales, Prince of Wales, and West Chiverton below the market price, time on.

An offer wanted for a few Mining Association shares.

Money advanced to any extent on good mining shares.
Office hours Ten to Four. Bankers: Bank of England.

MR. HENRY MANSELL, 44, THREADNEEDLE STREET,
LONDON, has FOR SALE the following shares, free of commission :—

25 Chontales, £1 3s. 9d.
20 Grenville, £2 6s.
30 E. Gren., £3⅞, call pd
50 Prince of Wales, 23s 6
25 No. Treskerby, 19s.
10 New Lovell, £2⅞.
5 West Chiverton, £55.
10 Chiverton Moor, £4⅜
50 Tamar Valley, £1.
20 So. Condurrow, 21s 6d
50 Drake Walls, 17s.
50 Great So. Chiverton.
25 Royalton, 29s.
50 Taquaril Gold, 5s. pm

H. M. advises the immediate purchase of East Caradon, New Lovell, South Condurrow, and Tamar Valley shares.
Thirteen Years' Experience.
Bankers: London Joint-Stock Bank.
References exchanged.

WALTER TREGELLAS, 122, BISHOPSGATE STREET WITHIN, LONDON, E.C., DEALS in all STOCKS AND SHARES, either for cash or the fortnightly settlement.

BARTLETT AND CHAPMAN'S "INVESTMENT CIRCULAR AND FINANCIAL RECORD"
(Published on the first Wednesday in each month)

Comprises—A Comprehensive Review of the Stock, Share, and Money Markets; an Enumeration and Comparison of the Whole Circle of Investments; and Valuable Suggestions for Purchase or Sale.
*** Sent free on application.
2, Bucklersbury, London, E.C.

WEST CHIVERTON.—The interested efforts that have recently been made, and not without success, to depreciate the value of the shares in this rich mine in the market, have induced Messrs. BARTLETT and CHAPMAN to have it inspected by Capt. John Nancarrow, of Camborne, whose competency and integrity no one questions, and the report is most satisfactory as to the condition and prospects of the mine. The report will be forwarded on application.
2, Bucklersbury, London, E.C.

Established Twelve Years.—Twenty-four Years' Experience.

MR. F. W. MANSELL, 44, THREADNEEDLE STREET,
LONDON, E.C.
The PURCHASE and SALE of Stock Exchange Securities and Mining Shares negociated upon close terms. References exchanged.

EAST CARADON.—Advantage should be taken of the present low price of these shares. The mine is opening out for regular dividends.
Every information may be had on application to F. W. MANSELL.

SPECIAL BUSINESS in the following as BUYER or SELLER :—East Caradon, Prince of Wales, West Chiverton, Wheal Mary Ann, Drake Walls, Great Retallack, North Treskerby, South Condurrow, Great South Chiverton, Chiverton Moor, New Wheal Lovell, Marke Valley, Chontales, General Brazilian, Frontino, Don Pedro, and Taquaril Gold.
State number of shares and price to Mr. F. W. MANSELL, 44, Threadneedle-street, E.C. Bankers: London Joint Stock Bank.

INVESTMENT, LOAN, AND BANK AGENCY.
Established 1839.

PUBLIC SECURITIES of every description Bought and Sold upon advantageous terms. Facilities for payment, and every reliable information afforded to Investors.

LOANS granted, for one year or any shorter period, on Stocks and Shares having a market value.

Five per cent. interest allowed upon DEPOSITS of all amounts.

Money and Finance Agency Business generally undertaken.
RICHARD TAYLOR AND COMPANY.
No. 12, Clement's-lane, Lombard-street, London, E.C.

GOLD AND SILVER MINING SHARES.—
RICHARD TAYLOR AND COMPANY are DEALERS in the FOLLOWING SHARES :—

CHONTALES.
DON PEDRO.
PESTARENA.
PORT PHILLIP.
ROSSA GRANDE.
ST. JOHN DEL REY.

Investment, Loan and Bank Agency,
No. 12, Clement's-land, Lombard-street, London, E.C.

MR. T. P. THOMAS, MINING AGENT AND
SHAREDEALER, 77, OLD BROAD STREET, LONDON, has SPECIAL BUSINESS in the Van, West Nant-y-cria, Minera, Trelawny, Grenville, East Grenville, and West Godolphin Mines.

WEST CHIVERTON, WHEAL CHIVERTON, MINERAL BOTTOM, and other Mines in the Chiverton District.—Investors and speculators can have reliable information as to present position and future prospects of the above-named mines on application to T. P. THOMAS.

MR. CHARLES THOMAS,
MINING AGENT, GENERAL SHAREDEALER, AND AUCTIONEER,
3, GREAT ST. HELEN'S, LONDON, E.C.

Third Edition, price One Shilling; post-free, fourteen stamps,

MINING FIELDS OF THE WEST:
A PRACTICAL EXPOSITION OF THE
PRINCIPAL MINES and MINING DISTRICTS of CORNWALL and DEVON.
Published by CHARLES THOMAS,
At No. 3, Great St. Helen's, London, E.C.

ESTABLISHED SEVENTEEN YEARS.

GRANVILLE SHARP AND CO.,
SHAREDEALERS, 32, POULTRY, LONDON, E.C.
Bankers: London and Westminster Bank, Lothbury, London, E.C.

RELIABLE INFORMATION GIVEN TO SHAREHOLDERS & INVESTORS.

All Stocks and Shares BOUGHT and SOLD at the closest market prices nett.

WANTED TO PURCHASE, the following shares, or any part, for cash :—

50 Trumpet Consols.
50 Nangiles.
5 Wheal Seton.
500 Great Caradon.
100 East Grenville.
200 Wheal Grenville.
150 East Chiverton.
200 East Trumpet.
50 Wheal Trelawny.
20 Wheal Jane.
100 Prince of Wales.
50 New Lovell.
4 West Wheal Seton
1000 North Jane.
10 Wheal Mary Ann.
100 East Caradon.
100 Lovell Consols.
15 Providence.

Sellers will please state number and lowest price for cash.

N.B.—It is quite impossible to "OFFER" a list of SHARES for SALE at FIXED PRICES, as market prices vary daily, and sometimes hourly.

NANGILES MINE.—
WANTED TO PURCHASE, TWENTY or THIRTY SHARES in this MINE, FOR CASH.
Sellers must state number and lowest price, for cash (all calls paid), to—
GRANVILLE SHARP AND CO., 32, POULTRY, LONDON, E.C.

EAST CHIVERTON MINE.—
WANTED TO PURCHASE, ONE HUNDRED or TWO HUNDRED SHARES in this MINE, FOR CASH.
Sellers must state number and lowest price, for cash (all calls paid), to—
GRANVILLE SHARP AND CO., 32, POULTRY, LONDON, E.C.

NORTH JANE MINE.—
WANTED TO PURCHASE, FIVE HUNDRED or ONE THOUSAND SHARES in this MINE, FOR CASH.
Sellers must state number and lowest price, for cash (all calls paid), to—
GRANVILLE SHARP AND CO., 32, POULTRY, LONDON, E.C.

MR G. D. SANDY, STOCK AND SHAREDEALER,
48, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the following shares at nett prices :—

15 East Lovell, £8 6s 3d
10 East Caradon, £8 17s.
20 East Carn Brea, 11s. (call paid).
5 Cook's Kitchen.
10 Cwm Darren.
3 Carn Brea.
50 So Condurrow, 20s 9d
4 Wheal Seton, £74¼.
30 W. Godolphin, £1 3 9
20 W Great Work, £3 8 9
50 New Lovell, £2½.
35 North Crofty, 23s. 6d.
40 Great So. Chiverton.
5 Tincroft, £16¾.
10 Chiverton, £2 11s. 3d.
6 Wt. Chiverton, £54½.
5 Mary Ann, £21¾.
15 Marke Valley, £9 3s 9
50 Taquaril, 4s 6d pm.
30 Chontales, £1 2s. 6d.
60 Prince of Wales, 23s.
50 No. Treskerby, 18s 6d
10 Great Laxey, £19 2 6
120 Tamar Valley.
5 Trelawny, £8¾.
10 Chiv. Moor, £4 7s 6d.

Mr. SANDY can recommend a few mines certain to have a considerable advance in a short period. Particulars on application.
References exchanged.

INTENDING INVESTORS.—The "FINANCIAL GAZETTE," published by Mr. Y. CHRISTIAN, should be consulted with a VIEW to the SAFE EMPLOYMENT of CAPITAL. It contains Original Articles, a Review of the Money Markets, and a selection of investments paying 10 to 17 per cent., and such information as is necessary to guide intending investors.
6, Bond-court, Mansion House, London, E.C.
Bankers: Bank of England.

INVESTORS IN MINING COMPANIES.—
Mr. CHRISTIAN recommends the immediate PURCHASE of NORTH LEVANT SHARES, whether bought to hold as an investment or to sell again. It is a splendid property, and dividends are close at hand. Although Mr. CHRISTIAN is the only person publicly recommending the purchase of shares in this sett, he does so with the greatest of confidence, feeling assured that those who buy now will do well.

CORNISH TIN MINES.—
Before investing in ROYALTON, get full information about EAST ROYALTON, from
T. A. MUNDY AND CO., 38, BISHOPSGATE STREET WITHIN; or
W. HANNAM AND CO., 449, STRAND.

CHONTALES GOLD COMPANY.—FULL PARTICULARS of the DIFFERENT CLASSES of SHARES can be obtained on application to Mr. J. H. MURCHISON, No. 8, Austinfriars, E.C.

MR. EDWARD BREWIS, STOCK AND SHAREDEALER,
No. 34, OLD BROAD STREET, LONDON, E.C., has BUSINESS, for cash or account, in all the various Mining Securities at best market prices.
SPECIAL BUSINESS in Taquaril, Great Laxey, West Chiverton, Don Pedro, Lovell Consols, Glan Alun, West Godolphin, Chontales, and Prince of Wales.
Bankers: The Alliance Bank, London, E.C.

MR. J. R. PIKE has FOR SALE the undermentioned SHARES
at the following net prices :—

50 Caldbeck Fells.
30 Carn Camborne, 10s 6
25 Chiverton, £3 3s. 9d.
7 Cook's Kitchen, £13.
5 Cwm Erfin.
5 Cwm Darren.
20 Cashwell.
25 Colquite & Cal., £1 12 6
20 East Grenville, £3 12 6
3 East Basset, £7 7s. 6d
50 East Seton, 17s. 6d.
30 Great No Laxey, £1 13
100 Great Retallack, £2¼
10 Great Vor, £12½.
25 Gt So Chiverton, 18s 9
100 Glan Alun, 8s. 9d.
200 Great Western, £2 1 3
1 Herodsfoot.
50 Hingston Down.
15 North Roskear, £3 3 9
100 Lovell Con, offer wtd.
195 West St. Ives, 4s.
50 East Reeth, £1.
100 Redmoor, 10s.
50 Budnick Consols, £1.

TIN MINES.—The price of black tin having advanced since the commencement of 1868 £20 per ton, many mines can now be worked to advantage that formerly were unprofitable. Great care, however, should be exercised in their selection for investment. Mr. PIKE can recommend two tin mines for their present excellent position and dividends during 1869.

WEST GODOLPHIN, WEST GODOLPHIN.—Shareholders in the above mine, or those intending to become so, should apply immediately to Mr. PIKE for reliable information.
Established in Cornwall and London 20 years.
3, Crown Chambers, Threadneedle-street, London, E.C.

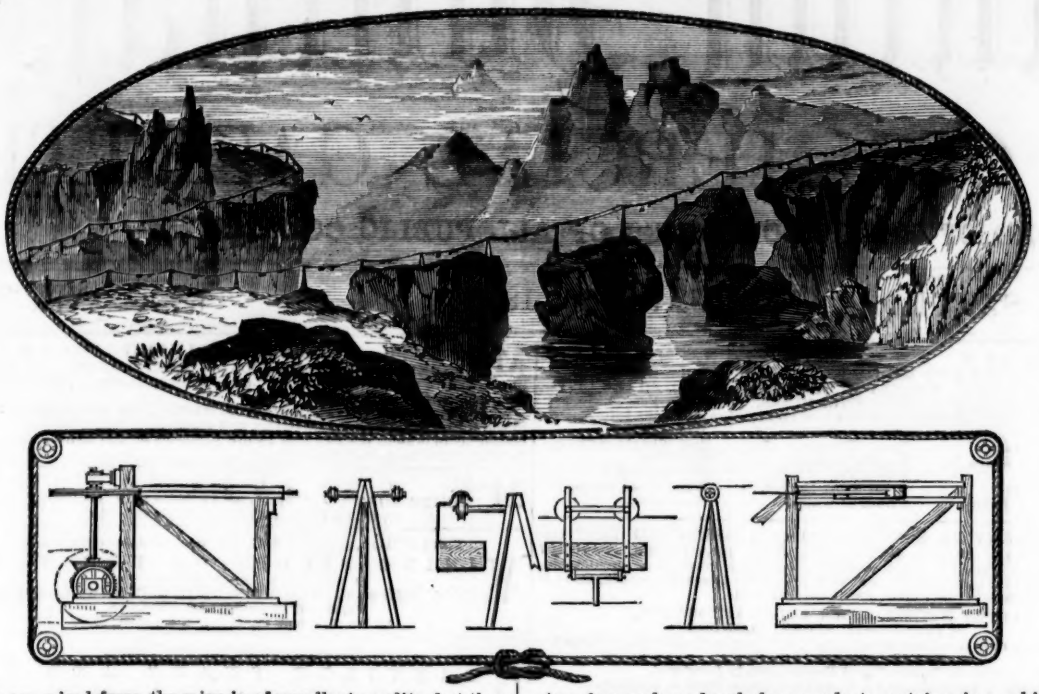
MR. THOMAS THOMPSON, MINING OFFICES,
12, OLD JEWRY CHAMBERS, LONDON, E.C.

ROYALTON.—The steady increase in the price of tin is causing a great demand for shares in legitimate tin mines, and which there can be little doubt, will become generally valuable. Investors, however, should be careful how they place money in deep and expensive mines, which can only pay profits with tin at high prices. They should rather seek an investment in those mines which, with extensive reserves, can pay profits with tin at its lowest price. Among the best of this latter class I place Royalton, and recommend the purchase of the shares wherever they may be met with. At their present price they are intrinsically very cheap indeed.

MESSRS. A. STUART AND CO., STOCK AND
SHAREDEALERS, 93, BISHOPSGATE STREET WITHIN, LONDON, E.C., have FOR SALE, free of commission, for cash or account :—5 Lovell Consols, 12s. 9d.; 10 Great Laxey; 6 Great Vor, £12; 25 Prince of Wales, 23s. 6d.; 20 Don Pedro, £4¼; 50 Taquaril, 12s. 6d.; 20 Frontino, 8s. 9d.; 15 New Lovell, £2¾; 5 Pedn-an-drea, £6; 30 Chontales, 25s. 6d.; 15 Royalton, 28s. 6d.; 20 Wheal Sparnon, 18s. 6d.; 5 Penhalls, £5⅛; 50 Glan Alun, 10s. 9d.; 5 Cwm Darren; 20 Lucy Phillips, 21s. 6d. Shares not quoted herein may be had at the best market prices.

ECONOMIC TRANSPORT OF MINERAL PRODUCE.

THE WIRE TRAMWAY SYSTEM.



"The ore raised from the mine is of excellent quality, but there are no means whatever of getting it to market;" "the payment of dividends would have commenced long ere this but for the unsuperable difficulty of getting the produce to the shipping port;" "the working of the mine would be much facilitated by the adoption of steam-power, but the almost total absence of water renders the use of a steam-engine impracticable;" and similar statements are so familiar to most persons engaged in mining enterprise that it has become almost customary for intending investors to put a definite series of questions before they embark a shilling. Unless there be ready means of reaching the shipping port, an abundance of water, plenty of cheap labour, and many other favourable conditions, which is almost impossible to find combined, they regard the undertaking with suspicion, and sometimes even condemn it as worthless, although in truth it may possess great intrinsic value, capable of very remunerative development when the locality shall have become more extensively opened out. In support of these views, the instances which could be mentioned are almost innumerable but for the present purpose one or two will be ample—the properties of the Cape Copper Company, of the several companies formed for working the mineral deposits of the northern districts of South Australia, and of the Quebrada Company, in Venezuela, may be taken; but before referring to these special cases, it may be well to describe an invention which is especially intended to meet all such difficulties connected with the economic transport of ore or materials, as have been encountered in the localities in question.

For some months past Mr. Hodgson, C.E., has given his attention to the construction of a cheap and efficient wire tramway, which could be readily got to work even where but little skilled labour is available, and where, owing to the natural obstacles to be overcome, the construction of ordinary railways would necessitate so large an outlay as almost to preclude the possibility of deriving any adequate pecuniary advantage. It will, of course, be understood that the invention is intended for localities as yet unprovided with railways, and it is thought that, though a great number of cases exist in Great Britain to which it may, and doubtless will, be applied with advantage, the chief development of the method will, probably, take place in the colonies and in other countries which stand in urgent need of light lines of some kind to lead down their productions to the main arteries of inland communication or to ports. The new wire tramway consists simply of a wire-rope of suitable size and strength passing from one to the other of the points between which a communication is to kept up—the rope is supported in grooved pulleys, which are firmly fixed to posts or standards at suitable distances along the line. To accomplish the easy passing of the points of support necessary to carry out a continuous line of communication, and to provide for the distribution of the burden and the application of motive-power, have been problems of no small difficulty; but, after experiments on a first trial length of half-a-mile during the autumn of last year, these practical details were worked out, and a contract was immediately entered into for a line of three miles in length to connect Messrs. Ellis and Everard's Markfield Quarries, near Leicester, with the railway siding at Bardon Hill. This line, which has recently been completed, was visited on Saturday by a number of gentlemen deeply interested in the question of economic mineral transport, and, therefore, desirous of witnessing it in practical operation. In this instance the line consists of an endless wire-rope, and the posts carrying the pulleys are ordinarily about 150 ft. apart, but, where necessary much longer spans are taken, in one case amounting to nearly 600 ft. This rope passes at one of its ends round a Fowler's clip-drum, worked by an ordinary portable steam-engine, and the rope is thus driven at a speed of from four to six miles an hour. The boxes in which the stone is carried are hung on to the rope at the loading end, the attachment consisting of a pendant of peculiar shape, which maintains the load in perfect equilibrium, and at the same time enables it to pass the supporting pulleys with ease. Each of these boxes carries 1 cwt. of stone, and the delivery is at the rate of about 200 boxes, or 10 tons per hour, for the three-mile distance. It is almost unnecessary to observe that the proportions of such lines can be varied to any extent to suit the requirements of any particular trade, ranging from 10 tons to 1000 tons per day.

Judging from the working of the Bardon Hill line on Saturday, the practical value of the system is beyond question, whilst from the many modifications in detail of which it admits it could be applied to suit almost every variety of condition. With only a 16-horse portable engine, working at 10 lbs. pressure, the boxes, each containing about 1 cwt. of granite chips, were brought along the line at pretty regular distances of about 100 ft. apart; there would thus have been something like 150 boxes travelling simultaneously, yet so absolutely noiseless is the apparatus in its action that, although the line passes for considerably more than a mile along the roadside, it could not be a source of annoyance to anyone. The test for the invention on the day in question was a very severe one, yet it bore it admirably. In the hurricane of the previous day the highest support—that at the upper end of the 600 feet span—had been blown down, and the rope had necessarily been slacked to permit of its being replaced in the pulleys of the re-erected standard (some 50 ft. high), so that the gradients which the boxes had to ascend between the higher supports became enormous, and in the long span they rose at an angle of not less than 1 in 5, yet they reached the supporting pulleys, and passed over them without upsetting any portion of the load, although, of course, their motion was far less steady than on more moderate gradients. Nor is this the only disadvantage under which the present line is working—they are running a single rope six miles long, which appears calculated unnecessarily to fatigue the rope, and materially to interfere with its durability. But trifling objections such as these are practically inseparable from the first application of any invention; and that the Markfield and Bardon line works so admirably not only entitles the inventor to the utmost congratulations, but affords unquestionable evidence of the great value of the wire tramway for the purposes for which it is designed.

As reference has already been made to certain mines, which appear to be especially in want of improved means of transport, it may be mentioned that the Cape Copper Company sold at Swansea during last year rather more than 3000 tons of ore, worth upwards of 70,000*l.*; yet the mines being situated some 80 miles from the shipping port, and a comparatively uninhabited country lying between, the cost of carriage is so great that only a small proportion of that amount is available for dividend. The cost of getting the ore from the mines to the coast exceeds all other charges, and could that cost be reduced to the rate per ton per mile which obtains at Bardon Hill, the amount available for dividend would be at least doubled. At the Cape the road from the mines is about one-half hilly, but not mountainous, the remaining half being over a sandy flat, so that the erection of a light wire tramway would offer no serious obstacles. For the establishment of a means of transport between Port Augusta and the northern districts of South Australia, the advantages derivable from such a tramway would be still greater; the route to be pursued is scarcely hilly, and since as great a drawback to the successful working of the mines as the difficulties of transport is the absence of water, it is suggested that the tubs or tanks used for sending down the ore could be returned laden with water instead of empty, and thus the satisfactory working of the line would be ensured. In the case of the Quebrada, the mines are situated, as the name implies, at the bottom of a deep basin, the only means of getting the ore to the shipping port being to bring it over the rim; here the construction and working of a railway would entail an enormous outlay, but with the wire tramway system it is very questionable whether, taking construction and working together, the cost would not be positively smaller than on the dead level.

Returning to the Markfield and Bardon line, it should be stated that the working on Saturday proved that the boxes hold firmly to the rope by the mere pressure which the weight of the box brings upon the groove provided to receive the rope, and that with regard to the advantage of this system of conveyance it is estimated by the local authorities who have the charge of roads over which the granite has hitherto been carried that the saving in wear and tear will exceed 100*l.* per annum, whilst the quarry proprietors will, of course, derive much greater advantage. The capital represented by the carts and horses hitherto used for the granite traffic between the points in question is upwards of 2000*l.*, whilst the total amount charged by the Wire Tramway Company (a private company in the city), for the tramway and machinery complete, is but 1200*l.*; the comparative cost of maintenance of the teams and the tramway, in working order, is too obvious to need comment. The inventor observes that in the case of lines for heavy traffic, where a series of loads, necessarily not less than 5 cwts. to 10 cwts. each, must be carried, a pair of stationary-supporting ropes, with an endless running rope for the motive-power will be employed, but this double rope system has not yet been practically tested, and it will probably be found that heavier loads can be more readily dealt with by shortening the distance appropriated to a single rope than by attempting double ropes and independent traction. Indeed, it is doubtful whether a load which cannot be carried by the single rope system is not too large to be carried economically by a wire tramway at all; the system in use at Bardon Hill can, with mere modification of detail, be made to carry half-ton boxes without difficulty, and such boxes are amply large enough for all practical purposes.

With the exception of the method of passing the points of support, the chief feature in Mr. Hodgson's invention, and that which gives it its great value both for novelty and practical utility is "the use of a travelling rope, which carries the load;" these recommendations the double rope system does not appear to possess. By the careful development of the single rope system Mr. Hodgson can accomplish all that is wanted from wire tramways, and at the same time do much to increase the profits of those interested in the working of mines; but we must have shorter ropes, and, where practicable, the utilisation of the load. The means of accomplishing both these objects are at once suggested by contrivances ordinarily employed in connection with the leading of coals in collieries, the utilisation of the load being seen in the self-acting planes, which are very common where the seams are at anything like an inclination; and the shortening of the ropes being readily effected, without increasing the number or power of the engines used, by the adoption of some such arrangement as has for some time past been successfully employed at the Marsden Colliery, near Burnley, Lancashire, in leading with the endless-chain. The duration of an endless-rope used for the wire tramway system would probably be from three to four years, according to quality; and, as it would be difficult, at least with our present experience, to determine the exact date at which a fracture will take place, it is essential that the amount of time requisite to reinstate the line in case of accidental fracture should be reduced to the minimum. Under these circumstances it will probably be found that two miles should be the maximum length of any one rope, although, perhaps, a dozen of these lengths might be worked by a single engine. The mode of dealing with such a case, as at the Marsden Colliery, is extremely simple; both the fore and the back chain has its own groove in a double grooved pulley (when wire-rope is used it would, of course, be a double clip-drum), so that the motion of each is necessarily uniform, although the lengths of chain are distinct from each. As Mr. Hodgson has already provided automatic contrivances for the boxes to leave and reconnect with the endless-rope whenever a heavy curve is passed, it could offer no possible disadvantage to introduce a new rope at these points, more especially as it would facilitate the application of a tightening sheave at places other than the extreme end of the line. This same arrangement would likewise admit of the introduction of branch tramways, just as the coals are led from branches in the colliery in question, and elsewhere in the same district—facilities which it would be very desirable to possess when several mines are worked by one company, and the ore has all to be taken to one shipping port, or even to one dressing-floors.

The invention is one which will prove a great boon to a large number of mines, from the enormous extent to which it will lessen the cost of getting the ore to market, and it may be fairly anticipated that the name of the Wire Tramway Company will hereafter appear on the expenditure side of the balance-sheets of many mining companies, with equal advantage to both undertakings.

Original Correspondence.

COMPETITION IN THE WELSH COAL TRADE.

SIR,—The present stagnation in the coal trade at Cardiff is creating grave anxiety amongst the owners of collieries, and I was not surprised, but rather gratified, to read in a local paper of the 12th inst. a letter headed the "Coal Trade," and signed "A Suffering Colliery Proprietor;" but what I am surprised at is the utter apathy, and I might almost say supine resignation, on the part of our capitalists, who are generally supposed to represent the highest intelligence, energy, and spirited enterprise of this district. I, for one, would be disposed to doubt that they do represent all these excellent qualities, because during the last twelve months (a period of unprecedented depression and serious loss to the coal trade) I have heard murmurings of difficulties under which they are labouring, and yet no effort has been made, or even practical suggestions put forward, for the removal or amelioration of the *cause* of this depression. Why is this? are they afraid to grasp the nettle? Perhaps all are not aware of the extent of the severe competition with the ironmasters, nor the terms upon which that competition is fought. Let me help them with a few figures, in the hope that some, more resolute than others, may see their way to making a practical suggestion of the *modus operandi* by which those engaged in the coal trade may have a *fair* fight to retain their connections. After taking into consideration that the three leading ironmasters in this district obtain 2740 lbs. per ton, the rate paid by them for cutting the Upper Four-feet seam does not on an average exceed 12¾d. per ton. The coal trade pay for the same service 17½d., an excess of 5d. per ton, or 39·21 per cent.:—

For cutting the Six Feet—
The iron masters pay 14¼d. | The coal trade pay 20⅛d.
An excess of 6d. per ton, or 41·39 per cent.
For cutting the Nine Feet—
The iron masters pay 13¾d. | The coal trade pay 19¼d.
An excess of 5½d. per ton, or 40 per cent.

As the quantity of coal produced from the Aberdare Upper Four-feet is trifling when compared with the quantities from the Six and Nine-feet seams (whence the Cardiff export market chiefly derives its supplies), it follows that the percentage of the two latter must preponderate when estimating the relative cost of production. With regard to the other classes of labour, I do not intend to occupy much of your space, and will, therefore, only give a few, as an indication of the whole. The daily wages paid are—

	By the Ironmasters.	Coal Trade.	Difference.	Per cent.
Overmen	3s. 10d.	5s. 6d.	1s. 8d.	43·4
Fluemen	2 2	3 4	1 2	53·8
Masons	2 8	3 10	1 2	43·7
Hitchers	2 9	3 7	0 10	30·3
Firemen	3 2	4 6	1 4	42·1
Door boys	0 6	1 2	0 8	133·3
Haulers	2 8	3 4	0 8	25·0

From the foregoing I may fairly assume that the percentage against the coal trade is about 45, or 1s. 6d. per ton, on the cost of *labour* alone. With such a difference in their favour (besides other advantages), is it to be wondered at that the ironmasters are developing their collieries, and taking large contracts for the supply of coal, whilst the coal trade proper (if I may use the term) is "stale, flat, and decidedly unprofitable?" I quite agree with "A Suffering Colliery Proprietor" in his gloomy forebodings as to the future. If the present inaction continues there is nothing for it but for "the weakest to go to the wall," or, in other words, the daily loss will so drain the coffers of the coal trade that "half time" at the pits will dwindle to total stoppage, the colliery proprietors will lose their capital, and the collier be driven to seek his bread at the pits of the ironmasters, who, with a surplus of labour thus put before them, will be in a position to make a still lower scale of wages. Is not this a miserable picture, but is it not a true one? I see that a "Colliery Proprietor" says the coal trade "is reluctant to reduce wages further." Honour be to them for the wish, but I much mistake if this is not a false notion of philanthropy. Whilst desirous of avoiding one evil, are we not irresistibly hurrying forward to a greater?

If what I have said shall have, in however slight a degree, aided a few of my neighbours in clearing up the doubts in their minds as to what course of action to pursue—with great consideration towards the workmen, as becomes the great employers of *labour*, but with equal consideration to themselves and their *capital*—it will have answered all the purposes of the present letter.—*Feb.* 18, EQUALITY.

ECONOMY IN THE SMELTING OF IRON IN SOUTH STAFFORDSHIRE.

SIR,—In a former article you paid special attention to this subject, in connection with a paper read at the Institution of Mechanical Engineers by Mr. C. Cochrane. Although the calculations and theories set forth in that paper were not based upon sound data, or the hopes it held out practicable, it has produced a most valuable effect in stimulating all connected with iron making to minute enquiry and investigation. In the numerous stigmas against the empirical systems of working and winning mines in the Black Country, I have seldom noticed anything unfavourable against the manufacturers of iron in any of its departments. These iron-producing industries may have been carried on without fuel or waste for what I have up to a recent period heard or read. So long as the "deep dark cellars" contained more than a sufficiency for the demand nothing was said about economising mineral in the manufacturing departments. Rude systems were in vogue, which were ill adapted for economising the mineral resources, still, inasmuch as the supply was more than the demand, and on the spot where it was wanted, and extracted at a cheap rate, there was no stimulus to economy or change of *modus operandi*. Not till the long-continued demand began to tell on the resources, and the development of new centres of mining industries cropped up on the scene of action, did our iron producers in South Staffordshire make any change in their action. Necessity, that prolific *mere* of invention, soon taught them that they must either succumb to a want of resources, or to the battle of hard competition, if no step was taken by economising the mineral, and applying to the manufactures the aid of science.

We must admit that in investigating the manner in which the mines were worked, and the systems for producing iron from the extracted mineral, we blame one as much as the other for empiricism—in fact, we are inclined to favour the former. I shall not be exceeding the bounds of truthfulness when I say that up to a very recent period a manager who understood the elements of science in its application to iron smelting and manufacture was the exception to the rule. Empirical notions, and systems of "rule of thumb," were the rule. This being the case, who can calculate the vast amount of fuel, mineral, and iron irretrievably wasted during the past 50 years, to go back no further? For the sake of argument, let us suppose that during the past year the yields of coal as fuel to produce a ton of iron were in excess of what they ought to the amount of (say) 5 cwts. per ton of iron on the 500,000 tons produced. This would be equivalent to 125,000 tons waste per year. Taking, then, the excess used for smelting a given quantity of iron during the past 40 or 50 years, and what an enormous waste is represented. There can be no doubt as to the truthfulness of this statement. During the past few months the writer has made careful enquiries at different iron works in the South Staffordshire and other districts with respect to the yields of ironstone, coal, limestone, &c., required to produce a ton of pig-iron, and has invariably found excessive yields at those works where scientific applications were most discarded, and where the management was under the guidance of ignorance and empiricism. Even to-day many works are under the superintendence of men who cannot distinguish lime from quartz in ironstone, or carbonates from peroxides. If, then, a manager knows not the composition and nature of the minerals he uses, how can he mix in proper proportion the quantity of fuel or flux necessary to accomplish a given result? In such circumstances experience is paid for dearly: not only is the loss personal but national.

We have an instance before us where a manager of over 50 years

experience condemned several thousand tons of ironstone (a carbonate), because the carbonate of lime contained in it was slightly coloured with the oxide of iron. He thought it was some other foreign mixture, which deteriorated the quality of the ironstone. A few drops of acid would have easily settled the difficulty. However, it is my pleasing duty to be able to show a "silver lining to the dark cloud." The year 1869 finds the Black Country wearing a different garment in the majority of cases. Only here and there do we stumble upon the old tattered styles, which are left to tell the sad tale of, shall we say, glory departed. Now we find the waste gases made subservient to useful purposes in lieu of fuel; furnaces enlarged and improved; calcining kilns of large dimensions built, in place of open mounds for that purpose; blast-engines improved and rendered more powerful; coal used for smelting which a few years ago was condemned; and other important renovations superseding the old system, once so much adored. Yet there is still a wide field for investigation and improvement. We have not yet reached the minimum yield for producing 1 ton of iron. As one of your correspondents suggested in the Journal of the 13th inst., something may be done to reduce the waste heat of the coal on its first entrance into the throat of the furnace. Science is always ready to give her helping hand in analysing the minerals, and telling in plain language what is required as mixture to produce a certain class or quantity of iron. If our furnace managers, and those interested in the manufacture of iron, will substitute intelligence for ignorance, science for empiricism, and unite hard experience with knowledge of theory, then our South Staffordshire friends, with others, will extend the duration of mineral resources, and benefit themselves and their country.

"Let us then be up and doing, Still achieving, still pursuing,
With a heart for any fate, Learn to labour and to wait."

Willenhall, Feb. 16. T. PARTON, F.G.S.

THE IRONSTONE MINES IN CLEVELAND—No. II.

SIR,—The same bed of ironstone, described in last week's Journal, has been worked very extensively in the Earl of Zetland's property, at Upleatham, by Messrs. Pease. It has been worked in the first place at its outcrop by open quarries, and is now being worked from two levels driven to the dip in the ironstone; the dip is 2 in. and upwards per yard. From one, about 100 yards in length, the laden wagons are drawn out by an engine placed outside in direct line, having two 21-inch horizontal cylinders, 3-feet stroke; the empty wagons run down by gravity with the rope. One of Fowler's engines placed, inside for pumping, pumps from the extremity by means of two clip pullies and an endless wire-rope. The other level referred to is about 1200 yards in length; the produce is drawn up the same inclination by an engine having two 16-inch horizontal cylinders, 3-feet stroke, placed outside in line with the plane. The empty wagons run down with the rope. The wagons are taken between the levels and tipping spouts by two small tank locomotives. The ironstone is then transferred into the trucks, holding from 9 to 10 tons each, and these trucks are lowered by a short self-acting incline to the sidings at New Marske, with two 12-ft. drums and iron wire-ropes.

The Skelton Mines are worked by Messrs. Bell Brothers, under Mr. J. L. Wharton's property. The produce is drawn from a pit 36 yards deep. One tub, carrying 26 cwts. of ironstone in each cage. The winding-engine has two 15-inch horizontal cylindere, 3-ft. stroke; two 8-ft. drums for wire-rope; three one-tubed boilers in use. An adit from the level of the back drains the mines as low as the bottom of the pit; a pumping-engine underground raises the water from the workings to the dip of this.

Messrs. Bell Brothers work also the Cliff Ironstone Mines. The drawing-pit is 34 yards deep; one tub, holding 28 cwts. of ironstone, is drawn in each cage. The cages are fitted with Calow's safety-catches, which are said to work satlsfactorily. There is no disengaging hook. The winding-engine is a portable high-pressure one, by Fowler and Co., having two 9-inch horizontal cylinders, 2-feet stroke, 6-ft. drum for round wire-ropes; can raise 600 tons of ironstone in 12 hours, and uses in that time about 5 cwts. of rubble coal. The boiler is tubular, and has been in use three years. There is a furnace pit for ventilation; no water is pumped in these mines, and but little timber is required to support the roof.

At the Brotton Ironstone Mines, worked by Messrs. Morrison and Co., the drawing-pit is 92 yards deep, 11 ft. diameter. An upcast near this is now being walled with 6-in. fire-brick. The drawing-engine has two 18-in. inverted and vertical cylinders, 2-ft. stroke, supported on cast-iron standards; two 8-ft. drums, 1½ in. round wire-ropes, wear about three months; pullies, 8 ft. diameter; one tub carries 30 cwts. of ironstone, and one tub drawn in each cage. There are three cylindrical plain boilers, one always off. The consumption of coal is 15 tons per week, and costs 12s. per ton at the works, being mixed rubble coal; these boilers are enclosed in a house. The ironstone, as worked here, is 8 ft. thick; the pillars are made 30 yards square, bords 4 yards and walls 3 yards wide; two miners in each bord, who will get about 12 tons of ironstone per shift of nine hours. The pumping-pit is some distance to the dip of the drawing-pit, and is 70 yards deep. The pumping-engine has one 18-inch horizontal cylinder, works two 9-inch lifts from the bottom, each 70 yards long, by means of two T-bobs and connecting-rods, going 9 strokes per minute, day and night. One Cornish boiler enclosed, and two vertical tubular boilers uncovered, 6 tubes in each, attached to this engine. These boilers consume above 20 tons of coal per week. The roof in some parts of these mines is moderate, in others it requires a large quantity of timber to support it.

The Lofthouse Mines, on Earl Zetland's property, are worked, by Mr. J. W. Pease, to the extent of 1000 tons per day from a lateral opening in the ironstone, dipping 2 in. or more per yard. The ironstone is drawn out by one of Fowler's portable plough engines, with clip-pulley and wire-rope. One end of the rope draws a train of laden wagons, the other end being attached to the empty train, which descends by gravity at the same time; a double road is required for this. This engine is placed near the mouth of the plane, and in line with it. Another engine, of the same construction, placed outside, pumps the water by means of two clip-pulleys and an endless wire-rope; the pump being placed near the extremity of the plane forces water through pipes to the mouth of it—one clip-pulley on the engine and another at the extremity. These engines have multitubular boilers, and are fired with coke. The consumption is moderate. One of these engines is enclosed in a house built of corrugated zinc sheets. The same proprietor works the Hobhill Mines, near Saltburn-by-the-Sea. The ironstone is also got by a lateral opening descending on the inclination of the stratum. One portable engine outside, enclosed in a house, and of construction similar to those above described, draws the produce from these mines.

The Liverton Ironstone Company are now sinking two pits in Lady Downe's property; one pit sunk 62 yards, to an upper and inferior bed; the other, above 140 yards deep, is being sunk to the bed of ironstone now worked at Craghall and Brotton Mines. One double cylindered horizontal-engine is erected at each pit, enclosed in houses of stone, both being of a substantial character, and are from the works of R. Daglish, St. Helen's. Attached to these engines are four Cornish boilers, uncovered. One of these engines at present pumps water from the deep pit, with a 16-in. lift sliding pipe to sink with at the bottom. One portable-engine, made by Robey and Co., of Lincoln, draws the stone from the sinkers. The water at the upper part of the pits is stopped back by cast-iron tubbing, with the flange inside; two cages, not at present used, are fitted each with Calow's safety-catches and disengaging hook.

The ventilation at each of the mines described is effected by means of furnace-power; those at Upleatham have three or four furnaces in operation. It is difficulty to clear the workings from powder-smoke without liberal supplies of air and brattice cloth. There is no difficulty with explosive gas, though some of the latter was encountered in sinking the Brotton Pit, but it is rarely found in the workings. For want of a proper covering for the boilers a reckless waste of fuel is occasioned at most of the mines in this district, the upper surface of the boilers being exposed to all weathers causes contraction and expansion, which is not in favour of a retention of strength and safety. Nearly the whole of the boilers in connection with blast-furnaces in the neighbourhood of Middlesborough are covered either with fire-bricks, leaving an air space between these and the boilers, or by some non-conducting composition, the boilers being suspended from cast-iron arches, resting on the brickwork. Coal is much less costly at Middlesborough than at the mines, which makes this discrepancy in the management of boilers the more remarkable.—*Feb.* 17. C. V.

MINING LEGISLATION.

SIR,—The present session of Parliament appears likely to be of more than ordinary importance to those connected with mining generally, and there is every appearance that some considerable alterations will be made in the existing laws relating to mines and collieries. In particular, we may say, it has long been felt that ironstone mines should be rated the same as other property of a cognate character, more especially as they are the direct means of introducing a large, and anything but a provident, population into districts which hitherto were all but rural, and so becoming the principal source from which the stream of pauperism flows, but from the cost of which the owners of mines have so far been exempt. A Bill on the subject will be introduced into the House of Commons, we have every reason to believe, at an early period, and is not likely to meet with any very large amount of opposition, seeing that there is no strong ground of defence which can be raised. Very different, however, is the case with regard to our coal mines, respecting which a strong contest may be looked forward to between the owners and those who side with the workmen, the friends of both being now more numerous than in the late Parliament.

It is expected that a Bill, founded on the report of the Select Committee appointed in 1865, and which, after sitting for two sessions, reported the results of their deliberations in July, 1867, will be introduced at an early period of the session. Several of the recommendations of the Committee are such as will be acquiesced in by the workmen. Amongst others may be mentioned the appointment of additional Inspectors. For all purposes other than consultation and the examination of collieries after an accident the present staff of Inspectors has been in every respect inefficient. This is not to be wondered at when we find that some of them have more than 500 collieries in their districts, so that any periodical inspection is entirely out of the question. The mining body have petitioned in favour of the appointment of sub-Inspectors, and we think the Committee have acted wisely in recommending an addition to the present number of Inspectors rather than the appointing of a lower class of persons than those who are now usually appointed. Probably one of the most important clauses, which will lead to considerable discussion, is that relating to the working hours of boys engaged in coal mines. The Committee had evidently considerable trouble in arriving at a decision on the point; but ultimately agreed to recommend that the working hours of boys under 16 should not exceed 12 hours per day. On behalf of the miners that number is considered excessive, and they think that the hours should be limited to eight per day. That number they consider to be in every way moderate, seeing that in many districts the adult colliers only work eight hours daily, and that it would be unjust to tax the physical powers of boys more than those of men. The best means of guarding against falls of roof, from which there are more deaths on an average than from any other class of accidents, has received the attention which it deserves; but it is questionable whether any scheme can be devised which will lead men to use ordinary precautions for their own and others safety. The occurrence of falls of roof and coal in most instances is attributable to the negligence of the miner, who, to save a few minutes work, too often becomes a victim to his own neglect. The compulsory weighing of all coal raised is a point on which the whole strength of the mining body will be brought to bear. The system is adopted in several districts, and with every success; and there is every reason to believe that it will be enforced, as it is evidently a much better test of actual quantity than can be obtained by any system of measurement, although the latter may be placed under the jurisdiction of the Inspectors of weights and measures.

One of the most singular recommendations made by the Committe is that relating to the working of mines, and in which it is stated that it shall not be lawful to employ more than 100 persons in any mine unless such mine be divided into districts or panels. How mines which have been largely worked for many years, or all but worked out, are to be divided into compartments or panels is not easy to conceive. Such may be done in mines being opened out, but the case is entirely different with regard to those to which we have referred.

In legislating on the subject of our mines and mining population, it is to be hoped that a measure of a satisfactory character will be brought forward and passed, as nothing is more calculated to disturb the good feeling which should exist between masters and workmen than leaving grounds for complaints, agitation, and appeals to the House of Commons. MENTOR.

THE DEEPEST COLLIERY IN ENGLAND.

SIR,—The deepest coal pits in England are those of Rosebridge Colliery, near Wigan. The working and machinery of this colliery were fully described by the writer in the *Mining Journal* in November last. There are two pits now being sunk for the Arley mine; the depth attained in November last was 702 yards, and the sinkings will now probably be near the Arley mine, which was estimated to be 800 yards down. The Cannel was worked from the same pits during the day, from the depth of 600 yards, and the sinking was prosecuted during the night.—*Feb.* 17. C. V.

MR. N. ENNOR'S REMARKS ON THE VIBRATION OF DISTINCT PORTIONS OF THE EARTH—No. II.

SIR,—In my last letter I intimated that I had had as much, and probably more, practical experience in the interior of the earth as any man now living, having through life been observant of Nature's laws; and, amongst other things, I have found that man's laws are only imperfect emblems or imitations of those of Nature, and that when they are not so they are unsuccessful. In fact, they are not the laws that will work well for man, or any portion of the creation. An ancient writer remarks, and rightly, that Nature's laws are universal laws, by which the mountains rise, oceans roll, and tides and rivers flow; and it accords with the dignity of the human mind to contemplate the scene of the terrible struggle the earth underwent before she assumed the form of a globe, since which she appears to have undergone still more tremendous convulsions before she attained her *present* form. The subsequent formations show her imprinted upheaves with beauty, grandeur, and sublimity. The present surface of the earth has given rise to splendid theories, that have excited lofty speculations, which have resulted in the measurement by man of the orbs of the celestial world; but he has not penetrated the veil in which is wrapped the structure of his own globe, but has still left it shrouded in impenetrable mystery. Then, I say, let man endeavour to ascertain the chemical contents of her rocks, and the nature of their formation,—ever trying to find portions of her working laws. From them he may obtain a glimpse of her powerful agents.

Such a globe as ours was never intended to remain an inactive or dormant mass: she has life, and when roused from sleep by the mighty touch of science her liberated captives leaped forth, destroying the *walls* of her supposed silent abode: and these imprisoned agents are more numerously crowded and active in mineral districts than in others, but all show life and motion to aid other portions of the world in some natural way.

I have long come to the conclusion that electricity and chemical action cause atoms or molecules to move, which must hourly cause changes to take place in all substances, whether they be rocks, strata, animals, or vegetables. Nothing can stand still; the laws of each resemble the ebb and flow of the tide—it is either growing or decaying, and continually changing its place. Practical miners of all times and ages have, and do, contend that all rocks grow and decay—that is, they believe they all live and die, as all creation does. These men gather their ideas from watchful observation of Nature's laws: they watch them when in the mines at work, and treasure them up in secret as hard-earned natural facts. The practical man has long since discovered that minerals are produced under chemical action from matter in motion, and motion is, in all probability, produced by galvanic or electric action on rocks, they producing chemical action. I am glad to see that chemistry is now becoming a more universally adopted science. My opinion is that chemical action is hourly going on in every layer of rock in the earth, and that each layer is continually undergoing changes.

Turning to motions said to be felt in portions of the earth, I say openly that I believe it to be a fact that they are felt for the reasons hereafter given, which through 65 years practice I have been endeavouring to prove. But for a practical man to broach a new theory against paid and educated men is even harder than kicking against the pricks. But "facts are stubborn things" for men only armed with theory to contend against. Never in my life have I met the man of theory who could overwhelm my facts. I have had sharp contention with many of them, but they always beat a retreat, setting me down as an ugly customer. But this troubles me nothing, and I stand to my guns so long as I have a shot left, and I have no fear of their being exhausted, as the longer I live the greater I find is my stock.

Twenty years ago I discovered that the average of nearly all productive east and west ore-bearing lodes, whether the dip was north or south, took a line into the earth of nearly the variation of the *sun* from spring to autumn, which is about 23½°. I may remark that lodes are continuous into the earth in these directions, so far as man has ever followed them, but strata and coal beds are not continuous into the earth, they crop out at the surface, and go down for 200 or 300 fms., and then turn up again; in fact, strata and coal beds are only secondary formations of new layers, generally forming basins.

A second class of lodes run about north and south, but dip east and west. These continue also to go into the earth, as do the east and west ones; and, singular as it may appear, neither of these two classes of lodes ever turn up again. They may be called the veins and arteries of the earth.

Your readers will observe that these two classes of lodes cut or chop up all the earth's surface into V-pieces. The north and south lodes in nearly every case move the east and west lodes, often as much as 1000 ft. from their proper line; and either of these lodes will shift coal beds or stratification up or down for hundreds of feet from what appears to have been their original position; and it matters not what the stratification may be that these lodes go down through. Granite, which is said by many to be a primitive rock, cannot prevail against these lodes, but gets thrown up or down, like the other strata. Granite when thrown up nearly perpendicular for hundreds of feet against slate rock looks strangely out of place, but the laws of Nature give these lodes control over every other formation. The coal miner calls these coal beds shifted out of line, up or down throws, which often rob him in a single day of what he thought was a permanent fortune. In a metallic lode I have known men to go to work in the morning, when it was worth 100*l.* per fathom, and it has been cut off in one hour, and the corresponding part never found again. The rich lode at Devon Consols was shifted 450 feet out of its supposed original line, but that was afterwards found. *Slate* formations are shifted in the same way, and those lodes are called by quarrymen posts. In nearly every crossing of lodes one is shifted, and all the strata near it as well. Hearing the general outcry of miners as to their being at such a loss when a rich lode was suddenly cut off by crossing of other lodes, caused me to turn my attention to it. I set about making diagrams and models of the earth's crust, as far down as man had descended, being guided, of course, by what could be seen, my object being to discover if any natural law could be traced as guiding it, and I had not been long engaged on these subjects before I found that these moves were governed by laws discoverable by man.

I sent my sections, &c., to Sir Charles Lemon, Chairman of the Cornwall Geological Society, asking his opinion on them; but their meeting being just past, he wished me to leave them with him until the next yearly meeting; but that I was unable to do, as I wished to publish them. In fact, they have been before the public for the last 20 years, and many times published in your Journal, and no one has disputed the correctness of one of them. I say it is an undeniable fact that the whole of the earth has been cut up into V-pieces (which may be compared to the teeth of a gin, but not so regular) by these cross lodes, millions of which are not a quarter mile over. Every man who has the slightest knowledge of mining and cross lodes, if he marks them down in his own mind, will discover that these lodes have, as I say, cut up the earth into pieces not to be numbered. Then let them ponder on the cause of these lodes having so cut up the earth, and shifted portions of every strata hundreds of feet up or down from their original lines. Or I may fairly ask the most learned Professors how they were *moved*, and *the cause*, and *when?* Was it by a single movement, or are they still progressing as time progresses? These are the problems they *ought* to solve; but surely they will not say these moves are caused by interior fire, or that they have any connection with burning mountains.

N. ENNOR.

THE RESOURCES OF COLORADO—No. XI.

SIR,—Before concluding these papers, the writing of which you have rendered a pleasing and grateful task to me, I would like to give a short sketch of the present easy way of travelling towards a land I have described as being so promising; so that, in the event of anyone being tempted to put my descriptions to personal examination and test, they may read how cheaply, pleasantly and quickly, without fatigue, they may do so.

The general interest that is taken in the great national undertaking of building the Union Pacific Railroad steadily increases as the road approaches completion, opening up and developing, as it does, vast regions of territory hitherto unknown, whilst the ability and economy which have characterised its construction has won the admiration of both America and Europe. The magnitude of the work, the lack of information, the difficulties of running a line through a country of such a mineral formation that the compass was often deflected as much 23°, of transporting material, the doubts expressed by the most experienced railroad builders as to the feasibility of the enterprise, would have damped the ardour of men less endowed with genius, energy, and means; but its projectors have fully proved their ability and earnestness by overcoming every difficulty, and the iron bands of civilisation are now stretching out 1000 miles westward from the Missouri River, and leaving but 300 miles more to be accomplished to the junction with the line coming towards it from San Francisco. The summit of the Rocky Mountains has been passed at a point known as "Sherman," and at a height of 8262 ft. above the level of the sea, and 7292 ft. above Omaha. From Chegenne, where the great ascent of the road commences, the rise is 70 ft. to the mile. The superiority of the road is the marvel of everyone who has travelled over it, and no road in America is so well or more thoroughly equipped, everything being new. Every improvement as been adopted. Sleeping "Palace Cars," fitted up with every luxury, and divided into private little state rooms, making a comfortable spring double bed at night and private saloon by day, with dressing and toilet arrangements at each end, with water-closets, well ventilated and well warmed. On Jan. 1, 1868, 90 loccmotives were in use, and 107 contracted for. The passenger landing from one of the magnificen ocean steamships in New York in ten days, proceeds by the Hudson River Railroad, due west to Chicago, 930 miles, in 32 hours; by the Chicago and North-Western to Omaha, in 20 hours; from Omaha to Chegenne, by the Union Pacific, in 40 hours. From Chegenne to Denver the railroad will be opened in six months from this time. Now the distance of 120 miles is ran over by six-horse stage-coaches in 20 hours. Thus the time from London to the heart of the gold and silver region of Colorado is actually within fifteen days of running time. I have received letters on the 16th day in London from Central City.

The expense of travelling, including the stoppage at New York, incidentals and living on the railroad, with the extra $5 per night for the sleeping car accommodation, will be within 40*l.*

Omaha, which is the eastern terminus of the Union Pacific, is now waking up to her importance, which has steadily kept pace with this gigantic undertaking. Three years ago, with a population of 3000, her inhabitants have increased to 20,000. Its climate is peculiarly healthful, and its facilities, from its location on the banks of the Missouri, of communication with the East by rail and South by steamboat, makes it the commercial centre and business metropolis of the North-West. Here can be found merchants who count their sales by millions, fine banks, churches of all denominations, private residences unsurpassed anywhere in size and architectural beauty.

Settlements along the line of this road have been built up with a rapidity of growth that surprises everyone. Every station is surrounded by a little village; while such towns as Fremont, Columbus, Grand Island, North Platte, Julesburg, and Chegenne have quadrupled their population within this present year; Chegenne, for example, which one year ago contained not more than half-a-dozen houses, now boasts of a population of 5000, with three daily and four weekly newspapers. The Union Pacific Company's lands, granted to them by the Government, consisting of every alternate section of land for 20 miles on each side of the road, or about 12,800 acres to a mile, are now offered for sale. A large portion of the lands, lying in the valley of the "Great Platte River," are considered among the richest and most productive in the world; these will be sold at a very low price to actual settlers. Crops grow with very little care, are easily harvested, and the railroad furnishes a convenient and speedy avenue to markets. The reality of this vast work is beginning to dawn upon the minds of the people. In addition to cutting and equipping more miles of road than has ever been accomplished by any other company in the same time, they have opened up to agriculture, commerce, science, and mining a vast territory heretofore almost unknown, have built cities on what a short time since was an unbroken wilderness, and are providing the highway for the unbounded wealth of China and Japan which is soon to flow over our country, and whose benefits are almost incalculable. This road has already developed a country and its resources more extensive than all the countries of Europe, and whose riches cannot be enumerated or estimated, has made a new market for manufactures, and a new source for supplies. When it has united two oceans by one continuous iron band, when it has established communication with the Eastern world, then it will be acknowledged that these happy results have been the work, and is due to the

pluck, genius, and ability of those who conceived and brought to speedy completion that great thoroughfare of nations—"The Great Pacific Railroad."

And, in taking leave of this subject, to me of so much interest, I hope that some who may read in your valuable Journal the desultory and crude remarks I have had the privilege of writing therein, will be induced to take a summer's trip upon this glorious road, leading to so glorious a country, and that the time is not far distant when it will become as familiar to the English traveller, merchant, manufacturer, and miner as it is to— E. H. L.

INVENTORS AND INVENTIONS.

SIR,—When great inventors air themselves, and blow their own trumpets so loudly in the *Mining Journal*, they should at least have some regard for the high character of the advertising medium they use for their self-glorification, and also some slight respect for that well-informed and observant class of readers who form the great body of your subscribers. If it were possible they might be *consistent*, and might allow your readers to have, probably, both the gift of memory and, moreover, some faint knowledge of processes which have been long since published to the world. Perhaps I am unreasonable in expecting so much from poor human nature. Let this be as it may, however, I will now show that I have ample grounds for these remarks.

In the Journal of June 6, Mr. Rickard, of Crown-court, in a letter on the Waste of Mineral and other Natural Products, referring to the tailings and slimes resulting from the working of gold and silver ores, writes in the following explicit and emphatic manner:—

"But with regard to slimes, their treatment or reduction as a profitable commercial undertaking is one that has up to the present time baffled the skill of chemists and metallurgists both in Europe and America. The chief and great difficulty to be overcome is the very light and minute state of the particles, and their tendency to float off the surface, thereby escaping contact with the heavy mercury, with which no amount of agitation in barrels, pans, patios, or other systems of amalgamation can secure contact sufficient to ensure perfect amalgamation, or even an approximation to it, the result being that, while considerable progress has already been made in the successful treatment of tailings, the slimes are allowed to run waste, and most operators who have attempted their reduction, and thus obtaining a profitable result, have given up in despair."

And he then confesses his own inability to master this great difficulty, in the following words:—

"On my return from Nevada, last year, I brought with me a sufficient quantity of slimes, as well as tailings, to enable me to test them in any new machines I might meet with in England; but after having placed myself in communication with some of the first makers and inventors of such apparatus, I could not meet with anything that would accomplish this most important object until a few weeks ago, when I met with a gentleman, who made a professional engagement with me to test a machine he had invented for the special purpose of treating auriferous slimes."

The result of experiments made with the machine invented by this gentleman is proclaimed a *great success*, an *important discovery*, and of *enormous value!* In subsequent numbers of the *Mining Journal* we are told that this invention had been duly protected by patent taken out by the original inventor. Next we find, just as surely as effect follows cause, that the writer, who proclaims his entire ignorance on June 6, applies for a patent also (some months afterwards), and in your columns of Nov. 14 says—"He flatters himself that he can determine without the original inventor's assistance the most suitable form for a machine intended to produce the best practical results." Having thus paved the way, this modest assayer, in your last week's issue, again presents himself to your readers, and assumes to himself all the credit of having solved the great problem which everyone had *given up in despair*, ignoring, as a matter of course, the gentleman who had invented the machine for the special purpose of treating auriferous slimes, who shed such a flood of light on his mind.

The next imaginary inventor, who figures in last week's Journal as a writer in the *Newcastle Chronicle*, under the initial "T.," addresses benighted gold miners from a lofty pinacle of disinterestedness and generosity. Quite of a different type from the last described specimen, he is a well-meaning scorner of patents and patentees. A man ready and eager to give to the world everything, even *that* which is not his own; I suppose upon the principle that the mouth of a *gift horse* ought not to be too rigidly inspected. It is presuming somewhat upon the ignorance of his readers that "T." has thus ventured to bestow upon the world what he terms "A New and Cheap Mode of Extracting Gold from Quartz;" a process not only *old* but exceedingly expensive, and wholly impracticable on a *large scale*. It is simply absurd. Has "T." never heard of Plattner, and Plattner's process of obtaining gold from quartz by the wet method? Let "T.," or anyone else who has any curiosity on the subject, send a shilling to Messrs. Griffin and Sons, 22, Garrick-street, Covent-garden, and get a translation of Plattner's detailed instructions for this process. After reading *that*, perhaps the generous "T." will deem it prudent to subside into silence.

You know well, Mr. Editor, that mining men have sufficient difficulties to contend with in all conscience, without being bothered by these *blowers* and pretended benefactors. A CONSTANT READER.

Feb. 18.

PROF. WARINGTON SMYTH'S LECTURES AT THE ROYAL SCHOOL OF MINES, AND SLATE QUARRYING.

SIR,—I always read Mr. Smyth's Lectures in the Journal with a great deal of pleasure. I will yield to no one in admiration of the wonderful industry by which he has collected such a number of mining facts, over so wide an area. In Lecture XXI., however, I find some statements from which I feel bound to differ. One of them may, perhaps, be an error of the reporter, when it is stated that Lord Penrhyn employs 5000 men; the number employed is, I believe, about 3000.

Another statement, which is correct when applied to slate quarries in general, but is not so in particular cases. "For every ton of good slate from 15 to 20 tons of rubbish may be reckoned," is quite true speaking generally; but in Lord Palmerstone's quarry as high an average as one in seven or eight is obtained. If a quarry has ordinary advantages as to transit means, debris ground, &c., 1 in 20 will pay, if two-thirds of the make is from 20 to 10 upwards.

The most serious objection, however, I have to make is against the Professor's assertion that in Lord Palmerston's quarry it has been found necessary to carry the workings underground. As I have been working in Lord Palmerston's quarry, and residing for several years in the Festiniog district, I can say that I never heard any practical quarrymen defend the policy of working this quarry underground. From calculations I have made, I find there cannot be much less than 1,000,000*l.* worth of slate rock left standing; and I have no doubt but that at some future day it will be uncovered, so as to get at it. There are certainly cases, such as the Croesor Quarry, where mining is quite necessary, but in Lord Palmerston's quarry it has always seemed to me to be bad policy. SAMUEL JENKINS.

THE CHONTALES MINES, AND THEIR MANAGEMENT.

SIR,—It is at all times an ungracious task to intrude one's own grievances upon the public, but when, as in my case, a man's professional character is assailed, delicacy in self-defence becomes false and suicidal. I am led thus to prelude the following observations upon the past and present management of these mines in consequence of my name having been prominently and unjustly associated with the dark cloud which has so long shrouded this property, and the bold and unwarrantable assertions made at the *last* and previous meetings of the shareholders. I have hitherto abstained from laying my version of the case before the public from a desire to avoid injuring this property by recrimination, and from a deep-seated conviction that ultimately the mines will prove productive under judicious management, but which I am now satisfied it has not recently experienced. Having been apparently selected as the scape-goat, I see no alternative but to lay a little of the true state of affairs before the public, and to appeal to them for an impartial verdict. I would briefly call attention, in the first place, to the fact that I only had the management of the mines and works for the first ten months, my authority being then superseded by commissioners—the late Captain Hill, R.N., and Mr. J. J. Truran, secretary of the company, who were sent out for the purpose of investigating the origin of certain rumours then afloat reflecting upon the management and the conduct of some of the subordinate officers. Suffice it to say that, after an elaborate enquiry into all matters of which I had the supervision and control, they were pleased to say, in their report to the directors, that—"Although Capt. Paul has had many and great difficulties to contend against, he has no doubt laid himself open to censure (*i.e.*, in promising to send so large remittances of gold with the then machinery); but the more serious charges laid against him *have not been substantiated*, and nothing has hitherto led us to doubt his earnest desire for the welfare of the company." And, again—"From all that has come under our notice we can form no other conclusion but this—that in due time we shall be able to send such returns of gold as will be the surest proof of the value of the mines, and *confirm Capt. Paul's former statements*. We have no anxiety as to the ultimate value of the company's mines, *but time must be allowed for preliminary works*." Further—"We have taken away a great number of hands that were before employed in *mining operations*, to lay out and extend the roads from mine to mine, as well as building houses." A large staff of officers and workmen was sent from England, arriving there just at the end of the dry season, and these, with few exceptions, were really incompetent for the duties assigned, and, instead of facilitating my plans and arrangements, enhanced the difficulties I had encountered from the onset. Neither of the agents had ever seen a gold mine before, and only one had any previous knowledge of the language of the country. Some of the miners and carpenters were engaged at 7*l.* per month, others at 10*l.*—this engendered discord; six deserted while on their way to the mines, and all the lesser paid ones revolted shortly after their arrival, many of them escaping. I should state that the mines are situated on a primæval forest, and were at that period without roads or convenience of any kind whatever, to all of which I had to pay due attention, incurring great cost, prior to placing the mines in permanent working order. These preliminaries had progressed satisfactorily previous to the arrival of the commissioners, as had also the erection of machinery and opening out of the mines, as given in their report to the directors at the time, so far as circumstances would admit. My plans were now radically changed. I became dispossessed of the management, which was thence assumed by the superseding power.

I shall not now particularise events, beyond stating that I asked permission to tender my resignation without it being considered that I had broken my agreement, binding me under a heavy bond for five years. This request was met with a refusal, leaving me no alternative but to remain and obey orders. I became now manager only in name. I could not obtain even a mule or a yoke of oxen from the company's ranch for work on the mines, nor any kind of stores or materials from the company's depôt, without previously obtaining the written sanction of a commissioner, whilst all kinds of mine work, with estimated cost, had to be submitted to the approval of the commissioners, I being thus reduced to the level of an irresponsible subordinate. This system was strictly observed up to the time of my leaving the mines. I mention these incidents to show that if too much money was expended during my so-called management, I at least possessed no controlling influence. I most emphatically assert that had I not been so hampered much of the capital sunk would have been saved, and the company would now have been in a prosperous condition.

Briefly referring to my management at the advent of the commissioners, and which would have been shortly completed had I been left to my own resources, I had arranged for the erection of a water-wheel, 35 ft. diameter by 3 ft. breast, to drive six arrastras. This was in course of construction for the Consuelo Mine, and would have been in position with all possible speed. The Consuelo Mine, which had run together before my arrival, was being re-opened, and would have been in full gear in time to supply the new machinery with ore. These legitimate operations were now suspended in furtherance of the much less urgent occupations of house and even stable building, &c. At this juncture cholera had broken out on the lake shores, and rumours of revolution were rife in the country. Nearly all the native labourers were discharged, and the works paralysed for about two months. On the return of the labourers new work was commenced, and that hitherto in progress abandoned. In short, so incessant were the delays and hindrances from sundry causes throughout the term of my engagement that I was totally prevented from carrying out my painfully organised, and I still believe well arranged, plans, even up to the time when Mr. Belt arrived in February, 1868, when my nominal management terminated. At the last meeting of the shareholders I declined replying to certain unjustifiable reflections made against me, for the same reasons I have hitherto abstained from noticing similar strictures, especially as business of more vital importance was under consideration. My name, however, being prominently associated with the proceedings, I feel impelled, much against my will, to notice the following allegations:—

1.—When Mr. Belt took charge of the mines, nothing had been done of a permanent nature with regard to their development.

2.—That the levels had all run together through bad timbering.

3.—That the tramway to Consuelo was in such a bad state as to be unfit for use.

4.—That the capital of the company was exhausted, and he (Mr. Belt) had only 15,000*l.* debenture to carry on the mines during his management.

5.—That I held legal authority to take out the pillars of the mines for six months, but had not done so, and he could only account for it by saying that I did not know how!

These statements are in some cases simply untrue, and in others easily explained; and I must express my surprise that they were allowed. I now crave permission to reply to them, as far as possible, *seriatim*. Plans and sections forwarded to the London office, also monthly reports from the mines, will testify to the work done, and are a proof against such assertions. At Consuelo the adit level had been extended to the lode, and thence east on same, and communicated with No. 3 shaft, sunk from surface on the course of the lode through the rich "nall" and the old working, and the mine below No. 2 level was in a thorough state of ventilation, with a good tramway in perfect operation. At San Antonio Mine an adit level had been driven about 75 fms., and communicated with a shaft sunk on the lode about 25 fms., and a tramway nearly completed, which was in full working order direct to the mill in a few days after Mr. Belt's arrival, and elicited from him, as well as from many others, the remark that it was "a fine piece of work." The western portion of this mine in the shallow workings was also open and secure, but Mr. Belt withdrew the men, and I understand the mine has since run together again. At Santo Domingo and the Pavon Mines I had driven deep adit levels, and communicated same with shafts sunk from surface on the lodes, with tramways fixed and in perfect working condition; in fact, I left the mines in as good working order as any new laid out set of mines of such magnitude and labouring under so many disadvantages could reasonably be expected, and it simply only required the completion of the machinery to make profitable returns. I do not deny that in the early part of these operations bad timber was sometimes employed; this arose from the circumstance that the agents and timbermen knew nothing of the comparitive merits of the indigenous wood, but after these were determined none but the best sorts were adopted. Again, all the levels driven and shafts sunk by me were open, and in good working trim, when Mr. Belt assumed the charge. When making the tramway from Consuelo to Santo Domingo it was pushed on as fast as possible for the purpose of bringing ore to the mill at the earliest moment, and several imperfections were purposely allowed to pass to avoid extra expense and to economise time. Besides, it was at first surveyed and laid down in conformity with the views of the commissioners, for the purpose of conveying ore direct to the Pavon mill, and the portion already laid in the valley of Santo Domingo was rendered available by a little extra daily expense for the time. It was not in a state of completion when I put it in use, and on the arrival of Mr. Belt he would not sanction its completion by the contractor, who sued for his money, when it was compromised with him. This fact, in itself, not only refutes the charge to which it is an answer, but to all dispassionate parties will surely tend to throw suspicion upon the motives which have actuated their originator into the commission of the unprovoked attack he has ventured upon. My answer with respect to capital may be summed up in this query—Where were the proceeds of the March call, 15,000*l.*, and the 3000*l.* deposited with the financial agent, Messrs. G. and P. Lasayo, to say nothing of the balance in hand at the bankers, and the produce of the gold on transit from the mines? Relative to taking out the pillars of the mines, I very much regret to have to give Mr. Belt a direct contradiction. He says I held legal authority to do so for six months. I assert emphatically, and am in possession of written proof (the authority itself), that I had only received that authority some 10 or 15 days prior to Mr. Belt's arrival, and I immediately commenced operations upon them. Now, had he contented himself with presumed facts and distorted and erroneous figures, his case would have simply demanded contradiction and commisseration; unfortunately, however, like the ass in the fable, he cannot refrain from a parting kick. He foolishly disputes my knowledge of my profession, and attributes impossibility to inability. I have been actively engaged in practical mining operations upwards of 20 years, and thoroughly understand its various manipulations, and can always conduct them properly when left to myself; but I will ask any of my professional brethren, Is it possible to carry out the instructions of a host of dictators? I was under the company for the space of two years and six months, and during one year and seven months there were now fewer than six changes in the commissioners under whom I had to serve; still, not one word of incompetency was uttered by either until the arrival of Mr. Belt. Surely, had I exhibited incapacity, inability, or impropriety of conduct, one or the other of these would have noticed it, and I should not have been permitted to remain so long. When, however, the funds of the company had been subject to considerable diminution it was discovered that in three essential elements—resources, mental capacity, and engineering qualities—I had broken down. Why had they not found it out before? There were commissioners enough sent out, at a very heavy expense, for the professed purpose of putting matters straight, and they did not find fault with me, but, on the contrary, would let me go when I wished to.

I fear I have already trespassed too largely upon your valuable space and upon the patience of your readers, still kindly permit me to add that my favourable impression of the intrinsic value of the Chontales Mines to a great extent is the same now as at first. Nor am I at all singular in the opinion of its merits. All who have inspected them have expressed equal confidence in their value, and confirmed my opinion; but the difficulties and interruptions encountered during my time were much greater in every respect than anticipated, and hence non-realisation of success. As a proof of my confidence in the capabilities of this property, I will add, by way of conclusion, that I hold a very considerable pecuniary interest in the shares of the company, and my earnest desire is to see it properly conducted, and the shareholders realising upon their holdings the amount of beneficial interest the physical condition of the mines is capable of.

5, *Moorgate-street, Feb.* 17. W. E. PAUL.

[ADVERTISEMENT.]

CHONTALES GOLD AND SILVER MINING COMPANY.

SIR,—A paragraph having appeared in last week's Journal, implying that I had no authority to offer the debentures of this company, I beg you will, in justice to myself, insert the following letter in your next issue.

81, *Old Broad-street, E.C., Feb.* 18, 1869. THOMAS ROSEWARNE.

[COPY.]

Chontales Gold and Silver Mining Company (Limited), 185, Gresham House, Old Broad-street, London, E.C., Feb. 9, 1869.

DEAR SIR,—I am instructed by the directors of this company to state that, in consideration of your obtaining applications for any portion of the debenture loan, they are prepared to allow you a commission of 5 per cent. on all sums subscribed through your influence.

In the event of applications being received for more than the amount unallotted, the applications received first will be entitled to an allotment up to the full amount of debentures authorised to be issued. The commission to be paid on the company receiving the money from the subscribers.

I am, dear Sir, your obedient servant,

T. Rosewarne, Esq. J. JAMESON TRURAN, Secretary.

ST. JOHN DEL REY MINING COMPANY.

SIR,—In a communication which appeared in the Journal of Jan. 23 one of your correspondents, who signed himself "An Anxious Shareholder," stated that "if evidence were wanting (which, unhappily, it is not) to prove the practical value of the suggestion of a large shareholder—that operations, save those in connection with the sinking of the two new shafts, should be altogether abandoned—it is abundantly supplied by the last advices." In support of his proposition, your correspondent quoted the words of Mr. Gordon, our superintendent at the mines, that "the outlay had been kept within the amount estimated, but the inadequate gold returns, which is so much less than we had reason to expect, caused the loss." That letter appeared on Jan. 23, and in the advices received from the other side, dated Feb. 2, Mr. Gordon wrote—"We have withdrawn from working the East Quebra Panella, and now our operations will be concentrated on the Gamba and such parts of the Bahu and East Cachoeira as will fairly cover the expenses incurred in working the same." . . . "It has been unfortunate (adds Mr. Gordon) that we should have been subject to interruption in the two best places we have had for obtaining produce at the same time, especially when we feel more than at any previous period the smallest decrease in our gold returns."

Taking these and other facts into consideration, and looking at them dispassionately, it becomes more and more evident that the various properties comprised within our estate (save the Bahu) are, for all practical purposes, altogether valueless; that, endorsing the views of "An Anxious Shareholder," it is impossible to come to any conclusion other than that the whole of the operations upon these properties should be forthwith abandoned; and that our reserve fund shall be exclusively appropriated to meet the expenditure of sinking the two shafts. Unless, indeed, this step is at once taken it is pretty obvious that long before the shafts are sunk to the depth of not much less than 176 fms. the whole of the available funds will have been exhausted, and that the remainder of the uncalled capital—5*l.* per share—will be required to complete them. I think it is high time this momentous matter should receive the attention of our executive.—*Feb.* 18. ANOTHER ANXIOUS SHAREHOLDER.

NEVADA AND CALIFORNIAN MINING.

SIR,—A letter, signed "P.," appeared in last week's Journal, in which the writer makes some very disparaging remarks on the prospects of English companies in Nevada and California. I trust you will allow me space for a few remarks in reply, as the writer gives no sufficient reason for his opinions, and the only reason to be inferred is one which a little consideration will show is entitled to no weight. Some years ago it seems he predicted the failure of certain English companies, and his predictions came to pass; but, inasmuch as those companies had recklessly purchased worthless properties on the bare assertion of needy adventurers, to be sure that they could not succeed required very little foresight. Even if the properties had been of value, when one reflects on the enormous expense at which every sort of work at that time had to be carried on, the scarcity and dearness of labour, the want of experience in mining requirements in those countries, and the mismanagement at home—there need be no wonder that these pioneers of English enterprise failed. "P." seems to be ignorant of, or to ignore, the fact that the Central Pacific Railway has altered all these conditions; "but," says he, "even if there are good mining properties to be met with, the Americans will not sell them to English companies." Why English money should be refused by Americans I cannot understand, nor do I believe that Englishmen are less capable of knowing when a good property is offered to them than Americans, now that the characteristics of good mines are well understood. At any rate, if such is "P.'s" opinion, I observe that certain eminent authorities, whose names I see in the prospectus of a newly-introduced company (Mr. J. A. Phillips, Mr. John Petherick, and Prof. Silliman), entirely disagree with him, unless they are grossly deceiving the public. All the evidence which has been collected proves that there is an abundance of silver ore in Nevada, in the crushing and reduction of which English capital may be, with prudence, most successfully employed, and shareholders in existing companies will require a better reason than "P." has given for abandoning their belief that some valuable mines have passed into English hands.

A SHAREHOLDER.

PESTARENA UNITED GOLD MINING COMPANY.

SIR,—I am an original shareholder in this concern, and although I have put myself to a vast amount of trouble to endeavour to ascertain the reason why its shares do not receive the same amount of attention as other similar enterprises with far less encouraging prospects, a less satisfactory financial position, and yielding immeasurably less returns of gold, I have never yet been able to solve the problem, and therefore I should like to know if any of my co-shareholders, more familiar with such matters than myself, can explain the cause. The mines, as regards their extent and auriferous value, are in every respect all that can be desired, but, like all such enterprises, require more time and, it seems, a somewhat larger outlay than computed at the outset. Unlike, however, I think I may say, any other gold mining company at present before the public, not only have the returns been equal to the estimates, but its producing capabilities have increased wherever the development has been extended. It is true that our late manager, injudiciously I admit, made undue returns, and at the expense, perhaps, of exploratory works, but while this has proved a temporary inconvenience it has also proved that, beyond all question, the mines are at least of the value represented; and, thanks to the skill of our present engineer-in-chief (Mr. Arthur Dean), even the as yet necessarily limited extension of underground operations, carried on under his skilful direction, sufficiently show that the only condition requisite to make this property practically fulfil the prophetic statement of the late deceased manager—that it would eventually prove the most remunerative gold mining enterprise in the world—is an economic development. What, then, I would ask, is the reason why our shares receive so little attention, and are quoted at such a discount in the Stock Exchange List?

Feb. 17. X. Y. Z.

NORTH TRESKERBY MINE.

SIR,—The letter of "An Ex-Shareholder, in last week's Journal, makes some unfavourable comments on the mode of keeping accounts, as well as on the prospects of working. Both subjects appear to me to have been treated in a manner hardly consonant with the interests of the general body of adventurers. The first cause of offence was taking credit for tin ores sold on Feb. 6 in the accounts of November and December. I find the report of September and October states the amount of copper ore sold on Nov. 26 "to come to the credit of the next account, and some tin." The last accounts are, therefore, in accordance with this intimation, by which all shareholders were duly forewarned of what might be expected. The balance-sheet of September and October in like manner contains an item of "tin sold on Dec. 5," so that the practice is usual, and appears to me quite consistent. It is obvious that the complexion of the last balance-sheet could have been very nearly estimated two months beforehand, by finding the difference between the general amount of costs, and the known and estimated returns. Following this course, we find the last copper sale realised, on Jan. 28, 827*l.* 18s., or about 80*l.* more than the previous one, with about 1 ton of ore less. This looks like an increase of average value. We may hope again for a tin sale. The last was 1 ton short of the previous sale, yet it realised 46*l.* more. This we know is owing to the advance of the market. The charges of the two months, judging from late returns, will be about 1100*l.*, so that our minds are relieved as to the necessity of a call for January and February. We are paying costs out of working again, and have several points of interest which may turn out well for the permanent interests of the mine. Shareholders must be prepared to expect changes in the character of the lodes from time to time, but they should stick by their property, and support it, if they are to derive any benefit from it in the end. Calls having been necessary must be met, and it is only fair to those who pay up and do their duty, that others who are remiss in this respect should be brought to book. Such a proceeding, however unpleasant, can excite no surprise. The accounts appear to me straightforward, the report is signed as usual by the agents of the mine, and there is nothing apparent which should induce holders to part with their shares. The balance of evidence is in favour of keeping them at present. COPPER.

CHIVERTON MINE, AND ITS MANAGEMENT.

SIR,—It is now nearly three months since there was any meeting of shareholders in this mine, and from that time to the present there has been no published report of the manager respecting the progress of the works, or the appearance of the rich lode discovered in August last. Before the last meeting, Capt. Julieff reported progress and prospects in the Journal at least once a fortnight. I want to know why all the shareholders are kept in ignorance as to the real state of their property, whilst the "bears" are permitted to knock down the value of shares almost to nothing, by circulating a report, which has never been contradicted, that the rich discovery was only a bunch of ore deposited, not by an upheaval, as all valuable lodes are, but by some unaccountable freak of Nature, and, therefore, of no prospective value? What do the "bears" say now to the rich discovery in Mineral Bottom, 100 fms. off on the same lode? Is it likely to be a succession of bunches rich only at surface for hundreds of fathoms in length? Why cannot the matter be discussed in the *Mining Journal*? If it is a good thing let the shareholders know the value of their property, that they may not be frightened by those people who are accustomed to "play" with shares. I would advise shareholders to get an honest opinion from some practical miner before parting with their shares. A SHAREHOLDER.

Meetings of Mining Companies.

CLIFFORD AMALGAMATED MINES.

A general meeting of shareholders was held at the account-house on the mine, on Wednesday,—Mr. F. M. WILLIAMS, M.P., in the chair.

The CHAIRMAN read the accounts for the two months ending December, which showed a total debit balance of 5653*l.* 7s. 5d., the loss on the two months' working being 2992*l.* 8s. 5d. The report of Capt. John Gilbert, the newly-appointed managing agent, was then submitted, as follows:—

The lode in Buzza's shaft, sinking below the 70, is small and poor. The 70, east of Buzza's, on the tin lode, is worth 10*l.* per fathom. The stope in the back of this level is also worth for tin 10*l.* per fathom. The lode in the 40, north of Buzza's shaft, is opening copper ore ground that will work on tribute at 10s. in 1*l.* The 30, driving west of shaft, on the north tin branch, is worth 5*l.* per fathom. The ground in the 30 fm. level cross-cut, north of Buzza's shaft, looks very congenial for making copper ore, but during the last two months there has been nothing cut to notice. We have working in this district 20 pitches, at an average tribute of 11s. in 1*l.* There is no change to notice in the 155 fm. level cross-cut, south of Taylor's shaft. The lode in the 20, east of Harvey's shaft, is worth for tin 10*l.* per fathom—a very promising lode. The lode in the 20, west of shaft, is worth 4*l.* per fathom. We are clearing and securing Harvey's shaft below the 20, to communicate with the 30 fm. level. We then propose driving a short cross-cut to intersect this tin lode 10 fms. deeper. There are twenty-four men stoping on this lode, at an average price of 4*l.* 7s. 6d. per fm., on a lode worth 8*l.* per fathom. We have cut ground and put in dams in the 174 and 184 fm. levels, on the great south lode, east of Hawke's man-engine-shaft. These, I think, will be of great importance in drawing, and afterwards in working these mines, as they will not only serve as a reservoir that will contain several million gallons of water, but will dam into the surrounding rock a large quantity of water that we shall never again be troubled with. They can also be used to regulate the quantity of water coming to Cadoza's engine, and will prevent the water, in case of accident to this engine, from flowing into the bottom of the mines. In consequence of the continuous floods of rain, and the bad repair of the engines, boilers, and pitwork, my predecessor allowed the water to rise in these mines, and completely drown the most productive ore ground; but I am glad to inform you that we have put in the engine-shafts good pumping-lifts, plunger-poles, &c., and have also good machinery. These alterations and the dams are now enabling us to fork 2 ft. 6 in. per day; and we believe, with a change of weather, these mines will be thoroughly drained and in good working order in about six weeks from this time. We shall then have completed Frederick's whim-engine and shaft, and commence to draw copper ore; and I find by referring to the late manager's last report that he promised, when this engine was completed, to draw copper ore enough to pay cost.

In the course of a long discussion which followed the reading of the report, it was stated that the arrears of calls up to the previous day amounted to 13,231*l.*, and that 1316 shares had been relinquished, reducing the present number of shares to 1564.

Mr. F. PRYOR said that as it had been decided by the Vice-Warden that shareholders could relinquish before paying calls—the company being unable to re-

cover until after valuation of machinery and materials, and striking balance—they must look to the 1564 shares for money to carry on the mine He was quite ready to bear his share of the responsibility, if others would the same.

The CHAIRMAN thought it right to state, for the information of the meeting, that he was in treaty with some influential parties who would be ready, he hoped, to take up the relinquished shares, if it should meet with the approval of the present adventurers He would, therefore, suggest, as soon as the matter had been discussed to the satisfaction of those present, that they should adjourn the meeting in order that the negociations might be concluded.

Mr. E. COOKE (London) noticed amongst the defaulting shareholders the names of many gentlemen who were well able to hold on and pay their calls. It was, however, more of a county question than for outside shareholders, and he could not believe that the county would allow such a calamity to happen as the stoppage of those mines. If the mines stopped all the other mines in the district would be affected, and a large number of labourers would be thrown out of work, and the families depending upon them so impoverished as almost to ruin the district. He, therefore, thought it was the duty of the wealthy gentlemen of the county to come forward, if only for patriotic and philanthropic motives, to take up the relinquished shares in the mine and keep the concern afloat. But, in addition to the good they would thus perform, he had every hope that they would get a fair return for their money.

Mr. T. WHITFORD, as representing the lords of Poldice, hoped when he had had an opportunity of consulting them that he might be enabled to induce them to take some of the relinquished shares.

Mr. P. P. SMITH had seen Mr. Tremayne, one of the lords, who had expressed his willingness to lend his aid, but could not act effectively without the others.

Mr. BROAD, referring to the statement that shares had been relinquished because the true state of affairs had been concealed, could assure them, as one of the committee, that the discovery of the arrears had come upon the committee with as great surprise as upon any of the shareholders. In fact, he had been assured over and over again by Captain John Richards that there were no bills kept back worth mentioning, and he even assured him that there would soon be a dividend, at a time when he must have known that the mine was heavily in arrear, and it was his duty to have made the committee acquainted with the true state of affairs. He considered the committee had been unjustly blamed, for us soon as they became aware of their position they laid a true statement before the adventurers.

The accounts and report were then unanimously passed.

Capt. GILBERT fully believed he would be able to carry on the mine successfully, and he fully expected that he should be able to lay a most favourable report before them at the adjourned meeting. For the last three days they had been forking 2 ft. 9 in. of water every 24 hours. (Applause). They were now pumping 5330 gallons of water per minute with nine engines.

Mr. P. WATSON (London) supposed they were now in the most difficult part of the mine, as the lower levels would become shorter, and they could, therefore, proceed more quickly.—Capt. GILBERT said that would be so; they would be continually gaining more space. They had got two dams in now, which would be of great assistance, and they would, moreover, find them a great saving to the mine hereafter.

Mr. E. COOKE moved a vote of thanks to the Chairman, and in doing so again urged upon the county people the duty of coming forward to the assistance of the Chairman and Sir William Williams, in order to make the mine a success. Seeing all that they had done for the mine, it would not be right any longer to allow them to bear the whole brunt. He (Mr. Cooke) would willingly do all in his power to aid in the resuscitation of the mine.—Mr. F. PRYOR had great pleasure in seconding the motion.

The CHAIRMAN, in returning thanks, said he took a deep interest in the Clifford Mines, because he fully recognised the fact that if they ceased working the surrounding mines must also stop, and the result would be most lamentable. Hundreds of families would be thrown into the depths of distress, privation, and pauperism. He had, however, strong hopes that no such result would take place.

The adventurers afterward dined together, under the presidency of Mr. R. R. Broad, and several animated and congratulatory speeches were made, one speaker expressing his conviction that in six weeks not only would all the water be forked, but there would be found 1000 tons of ore broken.

WHEAL BULLER MINING COMPANY.

A general meeting of shareholders was held at the offices, Bishopsgate-street, on Thursday,—Mr. HENRY MILFORD in the chair.

Mr. WILLIAM WARD (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed.

A statement of accounts, ending with costs for December, was submitted, which showed a debit balance of 723*l*. 16s. 11d.

The agents' report was read, as follows:—

Feb. 17.—Hocking's Shaft: Since the last meeting we have completed the sinking of this shaft from the 80 to the 92; driven east at the 92 on the course of the lode 2 fathoms, cased and divided the shaft, put in skip-road, and cut plat. We have also resumed the sinking, and are now about 3 ft. below the 92, where the lode is 6 ft. wide, and worth for tin 12*l*. per fathom, presenting a very kindly appearance. We are happy to say that the granite in which the lode is embedded seems to be undergoing a very favourable change, approaching much nearer in character the kind of granite we have hitherto met with about our best deposits of tin in Stevens's and in the north tin lode. These indications naturally lead us to look forward with great interest to the intersection of Stevens's with the main lode. We are pushing on the sinking of this shaft with all possible speed by nine men. The 80, driving west of cross-course, on Stevens's, is hard and unproductive. The 70, driving east on the north lode, is producing some good work for tin, and has a promising appearance. The stope in the back of this level is worth 9*l*. per fathom. No. 1 stope, below this level, west of cross-course, is worth 15*l*. per fathom. No. 2 stope, below this level, is worth 14*l*. per fathom. A stope below the 60, east of Knuckey's winze, is worth 10*l*. per fathom. A stope in the bottom of the 60, west of Bartle's winze, is worth 10*l*. per fathom.—Stevens's Shaft: In driving the 92 east we have met with some good bunches of tin, although the lode in the present end is small and unproductive. The 60, driving east on the north copper branch, produces 1 ton of good ore per fathom.—Kistle's Shaft: We have driven a crosscut at the 50 through a horse of ground, where we have intersected some good branches of tin, and shall at once commence stoping this ground, from which we hope to increase our returns during the ensuing quarter. You will perceive from the above report that although our tutwork has not been very productive lately, yet we believe by prosecuting the sinking of Hocking's shaft, and carrying out the other points of interest we have now in hand, we shall eventually open up a productive mine.—JAMES INCH, JAMES BROWN.

The CHAIRMAN moved that the report be received and entered on the minutes, and the accounts passed and allowed. He stated that the committee had not thought it necessary to have either of the agents at the present meeting, inasmuch as since the last meeting Mr. Ward, their secretary, had visited the mine, and, therefore, could afford the shareholders any information they might require additional to that contained in the report. The material point in the development of the mine was the reaching of the junction of the lodes by the sinking of Hocking's shaft. As to the agents, it was but due to them to state that they were in every respect most efficient and energetic, and that if the mine were once more to be a remunerative property none could more satisfactorily develope its resources than their present agents.

The SECRETARY stated that the shaft referred to had not been sunk for many years, and their agents, as well as others, were of the decided opinion that upon this work was based the hope of successful results being realised.

Mr. WARD said the fact was that they were now doing that which ought to have been done years since.

The report was received and entered on the minutes, and the accounts were passed and allowed. A call of 25s. per share was made. The committee of management were re-elected.

A vote of thanks to the Chairman terminated the proceedings.

CALDBECK FELLS (CONSOLIDATED) LEAD AND COPPER MINING COMPANY.

The annual general meeting of shareholders was held at the offices, Carlisle, on Wednesday,—Sir ROBERT BRISCOE in the chair.

The notice convening the meeting having been read, the report of the directors, and the special report of Captain Philip Hawke (which appeared in last week's Journal) were taken as read.

The CHAIRMAN congratulated the shareholders upon the improved and encouraging prospects of the company. He quoted statistics to show that their prospects were improving—for instance, in 1867 the quantity of lead ore delivered to the market was 248 tons, which produced 2884*l*. In 1868 the quantity was 582 tons, realising 6612*l*. In 1867 the quantity of copper ore was 16 tons 18 cwts., which produced 157*l*.; in 1868 it was increased to 163 tons 17 cwts., producing 2095*l*. The working expenses were also decreased. By capital account, in 1867, 3652*l*. was expended (including cost for engines and cottages); in 1868, 1067*l*. was expended. On revenue account, in 1867, 10,086*l*. was expended; in 1868, 9620*l*. The average cost of dressing the ore in 1867 was 3*l*. 10s. per ton; in 1868, 1*l*. 11s. 6d. per ton. He then commented at length on their position, prospects, and present operation; and explained why Capt. Hawke had been called in. He said the part of the mine known as the "Mexico" was still barren, but a richer lode had been discovered near it, but without any direct connection with it. He moved the adoption of the reports and balance-sheet.—Mr. BANKS seconded the motion.

Mr. R. BROCKBANK said that he was not going to oppose the adoption of the directors' report; that he also entirely agreed with the report of Capt. Hawke, recommending as it does the prosecution of the mine in depth, and the abandonment of the shallow drivings. In fact, he considered that the directors by adopting Captain Hawke's views had passed a vote of censure on themselves on their statements at last meeting, and on their management of the mine for the last 15 months. The Committee of Investigation two years ago had given the very same advice in the strongest terms, and the directors had proceeded in part to carry out their views. The manager, Capt. Francis, let the sinking of the engine-shaft to nine men, at 27*l*. per fathom, 2 fathoms stent. They sunk 3½ fathoms; he paid them 27*l*. for the 2 fms., and only 12*l*. per fm. for the 1½. Capt. FRANCIS objected, saying that the ground had eased.

Mr. BROCKBANK produced an extract from the *Mining Journal*, showing that the change in the ground had occurred before the bargain was let, that it was described as speedy for progress, and yet let at 27*l*. He also pointed out that in making a communication between the 90 fm. or adit level and the engine-shaft, Captain Francis had stated in his report, six months before last general meeting, that his cross-cut was within 1 fathom of the engine-shaft, and yet he came to that meeting and stated that the communication was not even then complete, although during the six months he had applied all his skill and spent about 400*l*. in driving about, quite at a loss where the shaft was. He told the directors that with such incompetent management they would never prosecute with success the deep working of the mine. He said that the system of letting the men 1 or 2 fathoms stent, and then giving them more or less, as the captain thought fit, for the remainder of the month, was a bad one. The men spent all the time they could over the portion let to them in the hope of getting more for the remainder of the month, which they often did. This system demoralised the men, and was a great cost to the company, as the meeting would see when he pointed out to them that by the accounts laid before them 5000*l*. was spent in these sham contracts during the 15 months. He had not the least doubt that at least 1000*l*. of this might have been saved to the company by a proper system of contracts.

Colonel SALKELD said now that the attention of the directors had been called to this matter, he had no doubt that they would introduce a better system.

The report was then adopted. One of the retiring directors was re-elected.

Mr. BROCKBANK then asked leave to move a resolution, requesting the directors to carry out the arrangement entered into with the lessors for the purchase of an extension of the lease to 50 years, with a reduction in the royalty from one-tenth to one-fifteenth, which was obtained for 3000*l*., and submitted to the first general meeting, when working the mine in depth was first contemplated, and also authorising the directors to make a call of 2s. 6d. per share for this purpose. As the directors were now about to proceed, he hoped, with energy and resolution to carry out Capt. Hawke's recommendations as to working the mine in depth, it was most important that this bargain should be carried out, as with even the present sales of ore the saving during the past year in royalty would have been 300*l*. In addition to this, the lease would be out now in sixteen years, and it was most important to have the extension. His reason for proposing the call was that the directors had explained that they wished to carry on the mine, the sinking included, without making any demand on the shareholders—making the mine pay cost, in fact. Seeing that the reserves of discovered ore in the western part of the mine were much worked out, he judged from that fact that Capt. Francis had been robbing the ore out below the 90, by the most expensive mode of operation known in mining, and commonly called dragging it out by the hair of the head. He must be getting very scarce of ore in the western ground above the 90; and, as they had only the almost untouched discoveries in the Mexico, or, as it was now named, Crown Point, to depend on for their working cost, he felt that it was more than could be expected to pay this 3000*l*. in addition.

Mr. BANKS seconded the resolution, which was adopted.

Dr. TIFFEN then explained that in addition to the discoveries in Mexico, which he did not set much by, they had a valuable run of ore in the western part of the mine, which was seen in the 30. He admitted that the ends of the 60 and 90 were not yet driven up to it, but still he looked for important help from it.

The meeting separated without electing another director in the room of Mr. T. Walker resigned; so that there are only five directors now on the board, nine being the number directed by the Articles of Association. As the Chairman did not point out these vacancies, and request the meeting to make the needful appointments, probably the shareholders were not aware of the necessity.

ENGLISH AND AUSTRALIAN COPPER COMPANY.

The ordinary general meeting will be held on Thursday.

The report to be submitted states the gross quantity of ore delivered to the works by the South Australian Mines Association from July 1, 1867, to June 30, 1868, has been 4116 tons 1 cwt., against 5616 tons 7 cwts. during the preceding 12 months; 2006 tons 2 cwts., against 3434 tons 4 cwts. of ore, regulus, and rough copper were received from other mines; 1368 tons 7 cwts., against 2808 tons 3 cwts. of ore were smelted at the Burra Smelting Works; 4272 tons 15 cwts., against 6227 tons 7 cwts. of ore and regulus were smelted at the Port Adelaide Works; 1676 tons 14 cwts. 2 qrs. 27 lbs., against 2173 tons 19 cwts. 1 qr. 15 lbs., of copper were made at the Adelaide Smelting Works; and 1276 tons 17 cwts. 1 qr., against 1495 tons 3 cwts. of copper were shipped from South Australia. At the Burra Works three furnaces were kept at work during July, August, and September, 1867, when they were let out to accumulate a stock. At the Port Adelaide Works the average number of furnaces at work during the first half-year was 3¾, and 4 for the second half-year. Both the refineries were, more or less, constantly at work. The ore received from the Burra Burra Mine was 4116 tons 1 cwt., against 5616 tons 7 cwts. in the previous year. It has been determined by the directors of the Burra Burra Mine to renew the active working of the mine upon new principles, and the employment of improved mining and dressing machinery; and Mr. Darlington, who has recently returned to England from his inspection of the mines, is superintending their construction. When completed, it is fully expected that this mine will return to its former yield of at least 12,000 tons per annum. In the meantime the operations would be suspended, though ore would continue to be delivered at the works until the end of January.

The railway to Port Wakefield is in course of completion, and the extension of the railway to the Burra is expected to be completed about the end of September.

The importance of effecting a reduction in the heavy cost of fuel has for some time past occupied the anxious attention of the directors. The high rates for freight have hitherto prevented any large savings in this department; and the directors are of opinion the time has arrived when it will be necessary to erect furnaces on the New South Wales coal fields. This will not only enable them to smelt there at a minimum cost of fuel, but will also, by ensuring return freights of ore for the coal ships, greatly cheapen the cost of fuel at the Port Works. Mr. Hamilton has succeeded, during his late visit to Newcastle, in securing a freehold site of 36 acres, in every way eligible, and on very favourable terms. They do not propose at once to erect works on a large scale, but so to arrange them that additions may be made as required. The funds for the proposed outlay under this head will be obtained by the sale of surplus lands and stock, the further use of which the extension of the railway to the Burra has rendered unnecessary for the purposes of the company.

The accounts show a profit of 4114*l*. 19s. 6d. on the operations of the year, after carrying 577*l*. 16s. 8d. to the credit of the reserve fund, for interest thereon. A continuation of the profit and loss account to Dec. 31 shows, after providing for the seventeenth dividend of 3500*l*., and the eighteenth dividend of 1750*l*., a balance, available as net profit, of 2649*l*. 18s. 9d., out of which the directors recommend a dividend of 9d. per share, payable, as usual, on March 1, free of income tax. The copper market did not improve until the middle of December, when a decided impulse was given to it by the determination of the English copper smelters to associate themselves together, when tough cake advanced from 74*l*. to 81*l*. per ton; best select, 76*l*. to 84*l*.; Burra Burra, 80*l*. to 86*l*. 10s., at which they are now quoted. It is satisfactory to add that there are stronger grounds than have existed for some time past for believing that this improvement will continue. The reserve fund now amounts, after adding interest to Dec. 31, to the sum of 12,259*l*. 6s. 4d.

FOREIGN MINING AND METALLURGY.

It appears from official tables that the exports of coal from Belgium in the first eleven months of 1868 amounted to 3,403,503 tons, as compared with 3,288,570 tons in the corresponding period of 1867, and 3,564,571 tons in the corresponding period of 1866. These totals indicate a sensible improvement in the state of the Belgian collieries; and although the exports of 1868 may be inferior to those of 1866, there is reason to hope that this difference will not be very sensible when we know the results of the whole year. The exports of November taken separately indicate the marked expansion in business which has taken place of late, the total for November having been 400,314 tons, against 373,997 tons in November, 1867, and 322,606 tons in November, 1866. If the results of December are similar to those of November, the difference between the exports of 1868 (whole year) and those of 1866 (whole year) will not be very considerable. The exports of coke from Belgium present somewhat similar results to those indicated in connection with the coal trade, the total exports to Nov. 30 having been 491,330 tons, as compared with 479,830 tons in the corresponding period of the year 1867, and 503,016 tons in the corresponding period of the year 1866. The imports of coal into Belgium have diminished in rather a striking fashion, having amounted in November, 1868, to only 15,829 tons, against 43,183 tons in November, 1867, and 25,925 tons in November, 1866; the total imports for the first eleven months of last year amounted to 229,461 tons, against 396,298 tons in the corresponding period of 1867, and 135,635 tons in the corresponding period of 1866. Some alarm has been created among Belgian industrials, by an announcement that the Eastern of France Railway Company intends to carry to a maximum point its tariff for the conveyance of coal and minerals. This measure, it is stated, is intended to be a reprisal for the deposit by the Belgian Government of a law with reference to railway working treaties. The news evidently requires confirmation, and we can scarcely believe it to be well founded; at the same time, one can well appreciate the sensation which it must create in the respective basins of Charlerol, Mons, and Liége, as, if the measure now indicated is carried out, it must be attended with disastrous consequences. The exports of pig from Belgium in the first eleven months of 1868 were 15,615 tons, against 10,828 tons in the corresponding period of 1867, and 14,009 tons in the corresponding period of 1866; of rails to Nov. 30 last year 67,386 tons, against 76,967 tons in the corresponding period of 1867, and 62,674 tons in the corresponding period of 1866; of plates to Nov. 30 last year 12,670 tons, against 11,715 tons in the corresponding period of 1867, and 15,406 tons in the corresponding period of 1866; and of hammered, rolled, &c., iron to Nov. 30 last year 65,068 tons, against 49,596 tons in the corresponding period of 1867, and 51,285 tons in the corresponding period of the year 1866. The whole of the exports of pig, iron, plates, rails, &c., were 176,794 tons in the first eleven months of 1868, against 168,291 tons in the corresponding period of 1867, and 162,600 tons in the corresponding period of 1866. The exports of minerals from Belgium amounted to 126,116 tons in the first 11 months of last year, as compared with 144,185 tons in the corresponding period of 1867, and 149,211 tons in the corresponding period of 1866; this branch of Belgian commerce would thus seem to be gradually declining. On the other hand, the importation of foreign minerals into Belgium is largely increasing, having risen from 289,381 tons in the first 11 months of 1866 to 301,551 tons in the corresponding period of 1867, and 369,332 tons in the corresponding period of 1868. The imports of pig into Belgium presented last year a rather sensible diminution as compared with the corresponding period of 1867, the figures for the first 11 months of 1868 having been 40,931 tons, against 50,144 tons in the first 11 months of 1867; last year's total was still, however, rather high, especially when we compare it with that for the first 11 months of 1866, which was only 29,591 tons. The foreign pig which comes to hand in Belgium is obtained principally from Great Britain, the receipts of British pig in Belgium being 34,078 tons in the first 11 months of 1868, against 45,260 tons in the corresponding period of 1867, and 26,210 tons in the corresponding period of 1866. The markets for iron and pig continue to maintain a good tone; a fresh advance in iron is anticipated.

Great activity still characterises the French iron markets, and prices are maintained with much firmness. Coke-made iron is quoted in the Haute-Marne at 7*l*. 12s. to 7*l*. 16s. per ton. On the other hand, pig has been rather quiet in the Haute-Marne group; mixed pig has been dealt in to a small extent at 3*l*. 4s. to 3*l*. 5s. 9d. per ton. In the Meurthe and the Moselle a fresh advance of 5s. per ton has taken place in the price of merchants' iron and special irons manufactured by certain works, which carry on their operations on the combination principle; this advance carries the price of merchants' iron to 8*l*. 12s., delivered free within the radius of the works. Rough pig continues in sustained demand; refining is quoted at 2*l*. 12s. 10d. to 2*l*. 13s. 8d. per ton, and speckled pig at 2*l*. 14s. 4d. to 2*l*. 16s. per ton. In the first eleven months of 1868 the quantity of pig imported into France free of duty, by virtue of the decree of Feb. 15, 1862, was 87,358 tons, as compared with 49,592 tons in the corresponding period of 1867, the quantity imported for shipbuilding purposes on the conditions prescribed by the law of May 19, 1866, was 1322 tons, as compared with 1338 tons in the corresponding period of 1867; and the quantity imported with payment of duties was 16,358 tons, as compared with 76,083 tons in the corresponding period of 1867, making the total imports of pig into France in the first eleven months of 1868, 105,038 tons, as compared with 127,013 tons in the corresponding period of 1867. The imports of iron and plates into France free of duty, by virtue of the decree of Feb. 15, 1862, were 47,414 tons, as compared with 58,001 tons in the corresponding period of 1867; the quantity imported for shipbuilding purposes on the conditions prescribed by the law of May 19, 1866, was 11,363 tons, as compared with 3434 tons in the corresponding period of 1867; and the quantity imported with payment of duties was 1729 tons, as compared with 2640 tons in the corresponding period of 1867, making the total imports of iron and plates into France in the first eleven months of 1868, 60,506 tons, as compared with 64,075 tons in the corresponding period of 1867. The aggregate amount of the exports by warrants from France of pig, iron, and plates was 144,335 tons in the first eleven months of 1868, against 106,988 tons in the first eleven months of 1867; the direct exports, including steel and worked iron, were 23,281 tons in the first eleven months of 1868, against 16,626 tons in the corresponding period of 1867. This increase in the exports of French metallurgical products must be regarded as a matter of some significance. The imports of minerals into France in the first eleven months of 1868 were 516,560 tons, as compared with 470,771 tons in the corresponding period of 1867.

In consequence of large deliveries of copper anticipated from Valparaiso, prices at Havre have rather declined; some unimportant operations have been concluded at Havre at 75*l*. per ton, deliveries at the end of February. At Paris, Chilian in bars has only found purchasers at 74*l*. 8s. per ton. Prices at Marseilles remain stationary, and affairs have been very much restricted. Toka is quoted by continuation at 72*l*. per ton; Spanish, 74*l*. per ton; and refined Chilian and Peruvian, 78*l*. per ton. On the German markets the state of affairs has remained much the same; there might, however, advantageously be a little more activity. At Hamburg the tendency has been rather more feeble, in consequence of the advices received from England. Tin remains without any very appreciable variation on the French markets. At Paris, Banca is quoted at 119*l*., and English at 115*l*. per ton. At Hamburg the article has remained without variation. The Dutch tin markets show a little more weakness; several sales have been made at Rotterdam at 67 fls., but at Amsterdam sellers have been able to maintain a quotation of 67½ fls. At Havre, Spanish lead has made 19*l*. 4s., and lead from other sources 19*l*. 4s. to 19*l*. 6s. per ton. At Paris the lead market has shown little animation, and prices have remained stationary. At Marseilles lead in saumons, first fusion, has realised 17*l*. 14s., and second fusion 17*l*. 6s.; lead in shot has made 18*l*. 18s., and rolled and in pipes 20*l*. 12s. per ton. At Berlin prices have remained without variation. At Hamburg there have been few transactions, but prices have been sustained. There has been rather an upward movement in zinc at Paris, in consequence of the good tone of that metal on the English and German markets. At Breslau the transactions effected have not been very numerous, but prices continue to be well sustained.

The export of coals from Belgium during the first 11 months of 1867, chiefly to France, reached 3,403,503 tons. The export of machines and machinery advanced to 14,344,855 kilogrammes, of 2·20 lbs.; in the corresponding period of 1866 it was only 10,617,265 kilos., and of 1867, 9,898,290 kilos. There has been a very large export this year of machinery to Russia, about 4,000,000 kilos. The export of machinery from Belgium to the United Kingdom amounted to 236,108 kilos. in the 11 months in 1868, 286,004 kilos. in 1867, and 675,667 kilos. in 1868. The import of iron ore and filings into Belgium in the 11 months of 1868 amounted to 369,331,880 kilos., and the export 126,116,018 kilos.; of pig and old, chiefly from the United Kingdom, 40,931,124 kilos. import, and 15,614,793 kilos. exported. The exports of iron comprised—rails, 67,385,747 kilos. (two-thirds to Russia); sheets, 12,670,013 kilos.; other kinds (including wire), 65,690,825 kilos.; iron wares, 15,432,555 kilos.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

ABERYSTWITH LEAD ORE DISTRICT.—It gives me pleasure to see mining reviving again, as it is the bread of the poor, and has been for a series of years past, for which the town and neighbourhood have to be grateful to the English capitalist. Considering, indeed, that a sum of from 8000*l*. to 10,000*l*. is paid monthly within a circumferance of 14 miles of our town, it is a proof of its advantages, and we must hope that our Welsh landholders will also show a liberal spirit. I remember, but a few years ago, going to a mining dinner at Goginan, with the late Mr. Fosset, the company's cashier; and, after enjoying a hearty dinner, the various captains began to converse on mining, when the manager (Capt. Trevethan) said—"The day may come when the mines of this neighbourhood and the town of Aberystwith will be closer neighbours." I did not much heed the remark at the time, but a few days ago, looking over the old familiar "Journal," I read Capt. S. Trevethan, jun.'s letter on the Mines of Cardiganshire and this vicinity. Drawing his remarks and people's attention to the Bronfloyd Lead Mine and the adjoining ground, it forcibly reminded me of his father's words, for the West Bronfloyd Mine is within an area of four miles to our town; and I sincerely hope those words may be verified, and to a crowning success to those who may embark, for the antecedents are good.—A SINCERE WELL-WISHER: *Aberystwith, Feb.* 16.

FRANK MILLS.—This mine sampled, on Monday, 100 tons of silver-lead ore, being the first sampling for the quarter. This is a gaining of nearly a week in time as compared with the corresponding sale of the previous quarter. The prospects of the mine seem to brighten at every sampling.

An important discovery has been made in the Ty-gwyn sett, formerly part of the Dolwen property, but now severed by assignment, on purchase, by Messrs. John Taylor and Sons. This discovery is upon the north lode of Dolwen, and is of equal importance to that company, inasmuch as it leaves that lode whole for the entire length of the ground between Ty-gwyn and that point in Dolwen where the north lode is supposed to form a junction with the south one, upon which such repeated trials have been made, and such satisfactory results attained.

SOUTH MERLLYN.—They are still progressing very satisfactorily with the workings here, and as the ground is opened the lodes produce some good ore, the 40 south having very considerably improved, the lode being worth 7*l*. per fathom, and in the end split into branches, which speaks well for the next level. The 30, north of Harvey's shaft, is also looking well, there being a branch of lead, 4 in. wide, in the end. Altogether the mine bids fair to prove a lasting one, and the forerunner of many to be opened in this promising district.

MEXICAN SILVER MINES.—A mine in the neighbourhood of Charcas, worked at an expense of $170,000 since Jan. 1, 1861, has yielded silver during that time to the value of $5,640,000. The Santa Rosa Mining Company is drawing out $95,000 worth of ore per week. Its works employ 160 hands, at the rate of 37 cents per day, and the expenses amount, in the aggregate, to about 5 per cent. of the value of the silver taken out.

THE MANUFACTURE OF WATCHES AND CLOCKS.—A most interesting and instructive little work, describing briefly, but with great clearness, the rise and progress of watch and clock making, has just been published by Mr. J. W. Benson, of 25, Old Bond-street, 99, Westbourne-grove, and the City Steam Factory, 58 and 60, Ludgate-hill. The book, which is profusely illustrated, gives a full description of the various kinds of watches and clocks, with their prices, and no one should make a purchase without visiting the above establishments or consulting this truly valuable work. By its aid persons residing in any part of the United Kingdom, India, or the Colonies, are enabled to select for themselves the watch best adapted for their use, and have it sent to them with perfect safety. Mr. Benson, who holds the appointment to the Prince of Wales, sends this pamphlet to any address on receipt of two postage stamps, and we cannot too strongly recommend it to the notice of the intending purchaser.

LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending Feb. 14 amounted to 9455*l*. 19s. 2d.

HOLLOWAY'S OINTMENT—WOUNDS, SCALDS, BURNS, AND IRRITABLE SORES.—The peculiarly mild soothing anti-inflammatory power exerted by this ointment strongly recommends its use by all persons who have charge of children. Accidents will occur in the nursery in spite of the greatest caution, and utmost vigilence. The scratch, the burn, or the scald, treated early with this ointment assumes no angry aspect and never long tortures the little sufferers, whose every cry excites each bystander's compassion, and pierces the parents' heart. Every nurse should consider this available ointment and essential to a well appointed nursery. No difficulty or danger attends its application providing moderate attention is bestowed upon the directions for use enveloping every jar.

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These shares will be entitled, by the Articles of Association, to a prior dividend for each current year of 6 per cent., and to an additional dividend of 25 per cent. of the net surplus fund.

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Applications for shares, addressed to the Directors, will be received by Messrs. COATES and HANKEY, 24, Gresham-street, E.C., and by Mr. S. SLEIGH, 2, Austinfriars, Old Broad-street, London, E.C., of whom also prospectuses and forms of application may be obtained.

In the event of the Directors not being able to make an allotment, the deposit will be promptly returned.

ABRIDGED PROSPECTUS.

The Dolwen Company, Limited.

CAPITAL £5000, IN 5000 SHARES OF £1 EACH.

DEPOSIT 10s. PER SHARE.

DIRECTORS.

MR. ALEXANDER BRIDGE, 7, Argyll-place, Regent-street, W.

MR. J. B. BALCOMBE, Aberystwith (Managing Director Bronfloyd Company).

MR. CHARLES FAUNTLEROY, Russell-street, Bermondsey.

MR. JAMES RHODES, Hanover-street, Islington, N.

BANKERS—THE NATIONAL PROVINCIAL BANK OF ENGLAND, ABERYSTWITH.

BROKER—MR. EDWARD BALCOMBE, 47, Threadneedle-street and Stock Exchange.

AGENT—CAPTAIN JOHN DAVIS, Manager, Llywernog Mine.

SECRETARY—MR. HENRY FERGUSON.

OFFICES,—QUEEN'S ROAD, ABERYSTWITH.

This company was incorporated March, 1867, in 1000 shares of £5 each, with the object of purchasing a lease for 21 years from October, 1866, arranged to be granted by the Hon. J. Kenneth Howard, Chief Commissioner of Her Majesty's Woods, &c., of the mines and minerals contained within and under 798 acres of land known as Bodcoil and Dolwen, and to work the said mines. Owing to the then pending commercial crisis only 421 shares were subscribed for; however, the proprietors, acting under the best obtainable advice, determined to take up the lease, and to carry out further exploratory trials in order to test the south lode. The work that has been so done will be best evidenced by the joint report appended to the prospectus of the agents of the Llywernog and of the celebrated Bronfloyd Mines.

The property is situated about 14 miles east of Aberystwith, 2 miles from Devil's Bridge, and about 1½ from Cwmystwith. It contains two masterly lead lodes; the south one being, according to repeated diallings, the same lode as the celebrated Frongoch of the Lisburne Mines Company, under the management of Messrs. John Taylor and Sons, which, upon a capital of £7500 (400 shares, £18 15s. paid), have yielded and returned £510 per share—total dividends, £204,000.

Its position will be further explained by the reports of Mr. J. H. Hitchins, consulting engineer to the Devon Great Consols Mines, and by Mr. Matthew Francis, C.E., formerly chief agent of the Frongoch Mine.

The directors were advised that Dolwen was one of the most promising pieces of unexplored mineral ground in the Principality, the development of which had been hindered by the questionable title of the Crown lessee; however, as in the interim the difficulties affecting the old lease were overcome by a new grant at one-fourteenth royalty direct from the Crown, they put in hand the exploratory trials recommended, and the result abundantly proves the soundness of Messrs. Hitchins and Francis' advice. These operations have been solely confined to the Dolwen or eastern portion of the property, and it is a significant fact that Messrs. John Taylor and Sons have recently purchased from this company the western ground, and formed a separate company to work the same.

In order to extend the basis of the present company, special resolutions have been passed to subdivide the 1000 shares of £5 each into 5000 shares of £1 each, without further liability—2000 of these shares will represent the outlay of the company to the present time, and the remaining 3000 shares will form the future working capital. Of the 3000 shares, 755 have been privately subscribed for, and the directors may add that as most of the speculative character attending the opening of a mine is in this case at an end, they offer to public acceptance the remaining shares (reduced to a minimum liability), believing that the economical application of the capital so to be raised will, with steady perseverance, develope a fine property.

Prospectuses, containing the full reports of the consulting engineers and mining agents above referred to, may be had on application to Mr. EDWARD BALCOMBE, Sworn Broker, 47, Threadneedle-street, and Stock Exchange, London, or at the offices of the company.

WATSON BROTHERS' MINING CIRCULAR

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MESSRS. WATSON BROTHERS return their most sincere thanks for the great patronage bestowed and confidence reposed in their firm for 25 years, and to assure their friends and clients it will be their earnest endeavour to merit a continuance of both.

Messrs. WATSON BROTHERS have made arrangements for continuing their weekly Circular, which has had a large circulation for many years, to the columns of the *Mining Journal*, their special reports and remarks upon mines and mining, and state of the share market, will in future appear in this column.

In the year 1843, when Cornish mining was almost unknown to the general public, attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. J. Y. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and share dealing than there is at present; and, from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services to all connected with mine or the market, as they have for so many years done privately, through the medium of their own Circular.

Messrs. WATSON BROTHERS transact business in the purchase and sale of mining shares, and other securities, payments of calls, receipt and transmission of dividends, obtaining information for clients, and affording advice, to the best of their knowledge and judgment, based on the experience of more than 30 years active connection with the Mining Market.

Messrs. WATSON BROTHERS also inform their clients and the public that they transact business in the public funds, railway, docks, insurance, and every other description of shares dealt in on the Stock Exchange.

Messrs. WATSON BROTHERS are also daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

Messrs. WATSON BROTHERS having agents and correspondents in all the mining districts, and an extensive connection among the largest holders of mining property, have the more confidence in tendering their advice on all matters relating to the state and prospects of mines and mining companies, and are able to supply shares in all the best mines at close market prices, free of all charge for commission.

SATURDAY.—Market very active for Grenville shares, at 42s. 6d. to 45s.; East Grenville, 3⅜ to 3⅞; East Caradon, 8½ to 8¾; Providence Mines, 35 to 37; Tincroft, 17 to 18; West Frances, 41 to 43; Chiverton, North Crofty, and Chontales shares flatter; Prince of Wales, 24s. to 26s.; New Lovell, 2¾ to 3; Drake Walls, 16s. to 18s.; Chiverton Moor, 4 to 4¼.

MONDAY.—There is still an active demand for Grenville at 44s. to 46s.; East Grenville, 3¾ to 4; East Caradon, 8¾ to 9¼; Providence Mines, 35 to 37; West Frances, 42½ to 45; Great Laxey, 19 to 20; Tincroft, 17 to 18; Prince of Wales shares not quite so firm, at 23s. to 25s.; Wheal Chiverton, 2¼ to 2⅛; Mineral Bottom, 3½ to 4; Chiverton Moor, 4 to 4¼; Chontales, 20s. to 25s.

TUESDAY.—The market is not quite so active to-day. Grenville, East Grenville, East Caradon, West Frances, and West Chiverton shares chiefly dealt in. Grenville, 43s. to 45s.; East Grenville, 3⅝ to 3¾; East Caradon, 8¾ to 9; West Frances, 42½ to 45; West Chiverton, 52½ to 54; Prince of Wales, 22s. 6d. to 25s.; Great Laxey, 19 to 20; Great Wheal Vor, 11½ to 12¼; Chiverton, 2½ to 2¾; Chontales, 1¼ to 1½; Don Pedro, 4¼ to 4½.

WEDNESDAY.—Active demand for Grenville, East Grenville, West Frances, Providence, and South Condurrow shares. Grenville, 44s. to 46s.; East Grenville, 3⅝ to 3¾; West Frances, 42 to 44; Providence Mines, 35 to 37; South Condurrow, 20s. to 22s. 6d.; Prince of Wales, 23s. to 25s.; North Treskerby, 18s. to 20s.; Chiverton Moor, 4 to 4⅛; Drake Walls, 16s. to 18s.; Great North Laxey, 30s. to 35s.; New Lovell, 2⅝ to 2⅞; West Chiverton, 54 to 56; Tincroft, 17 to 17⅛; Chontales, 1⅛ to 1¼; Don Pedro, 4¼ to 4½.

THURSDAY.—Market moderately active for East Grenville, Grenville, West Drake Walls, West Frances, and Providence. East Grenville, 3⅝ to 3¾; Grenville, 44s. to 46s.; West Drake Walls, 7s. 6d. to 10s.; West Frances, 43 to 45; Providence, 35 to 37; Prince of Wales, 22s. 6d. to 24s.; West Chiverton, 53 to 55; Chiverton, 2¼ to 2½; Great Laxey, 18½ to 19½; Great North Laxey, 30s. to 35s.; Chontales, 22s. 6d. to 27s. 6d.; Don Pedro, 4⅛ to 4⅜.

FRIDAY.—Good demand for Grenville, East Grenville, Prince of Wales, West Drake Walls, Providence, and Don Pedro. Grenville, 44s. to 46s.; East Grenville, 3¾ to 4; Prince of Wales, 22s. to 24s.; West Drake Walls, 7s. 6d. to 10s.; Providence, 35 to 37; Don Pedro, 4¼ to 4½; Great Retallack, 2¼ to 2½; Great Vor, 12 to 12¼; Chiverton Moor, 4⅛ to 4⅜; Chiverton, 2⅜ to 2⅝; Chontales, 25s. to 27s. 6d.; West Frances, 43 to 45; West Chiverton, 53 to 55.

Mining Correspondence.

BRITISH MINES.

BRADDA.—R. Barkell, Feb. 10: The water is still troublesome in the engine-shaft, but I expect the shaft will be down for another level in the course of a month. There is an improvement in the 50 north, where we now have a rib of copper, worth 1 ton per fathom. No change in the 50 south. The 40 south remains the same; there is about 2½ ft. of the lode on the west check, that will produce 1½ ton of copper per fathom, with a little blende. I am strongly inclined to think that the lead has gone north in this level, and the blende we have had of late is an indication that it is in that direction, but before we can prove this we must hole the sump for ventilation; the air here being bad will not admit of putting any more men on, and I have taken the men from the end and put them to rise against the sump to hole this ground as quickly as possible, there is about 10 ft. more to effect a communication. The sump is looking well for lead and copper, worth of the former 3 tons and the latter 1 ton, but the heavy rains have increased the water, and made it more troublesome for sinking.

BRONFLOYD.—T. Kemp, Feb. 17: The part of the lode which we are now driving on, west of cross-cut, in the 73 is composed of blue slate, intermixed with strings of lead ore. The winze from the 62 is communicated to this level, and has thoroughly ventilated this part of the mine. The lode to the west of the cross-cut in the 62 is worth 3 tons of ore per cubic fathom. The stope under the 22 is worth 1½ ton of ore per cubic fathom. We have resumed the stope to the west of winze in the back of the 52; lode worth 1 ton of ore per cubic fathom. The 52 fm. level end, west from old shaft, on the south lode, is composed of hard spar, strongly spotted with copper and lead ores. The 52 fm. level end, east of Barton's cross-cut, as well as the 40 fm. level end west, is without change to notice since last report. The mine and its machinery are in good working order. We sold 60 tons of lead ore on Tuesday last, at 13l. 3s. 6d.

BUDNICK CONSOLS.—J. Evans, Feb. 17: The tribute pitch on the north lode has very much improved, and the men are breaking good work for tin. The men clearing south are getting into the south lode, where I expect to find tinstuff that will pay well.

CAPE CORNWALL.—R. Pryor, T. Gundry, Feb. 15: The ground in the 100 and 70 fm. level cross-cuts continues much the same as when last reported on.

CARADON CONSOLS.—S. Bennetts, Feb. 16: The Clymo's lode, in the 78 west, is 1½ ft. wide, orey throughout. The main lode, in the same level, contains a little ore, but the ground about it is somewhat hard, and the lode small. The gossan lode is 2 to 3 ft. wide, containing spots of ore throughout, but not sufficient to save. A small branch containing red, black, and green copper ore, has just been cut in the 78 north; ground good.

CASTELL CARN DOCHAN.—J. Parry, Feb. 16: The lode in the forebreast of drivage in the cross-cut in the deep adit is now 4½ ft. in width. The ground continues very hard and close for cutting. There are a few specks of galena in the quarts, but we have not seen any gold the last few days; we are making a careful trial on 25 tons of the quartz.

CEFN BRWYNO.—J. Paull, Feb. 17: There is no particular change in any part of the mine since my last report, except at the 92 east, where the lode has improved, and is now worth 1 ton of lead ore per fathom. We have been able to do but very little to the costeaning, on account of the weather being so very rough and wet, but I hope to be in a position to state something definite about the north lode by the 25th inst.

CENTRAL MINERA.—W. Davies, Feb. 18: In the 50 yard level west little has been done in the driving, the men having been stoping in the bottom, where some fine rocks of lead have been raised. The ground continues of a most favourable character, producing occasional stones of ore. In this level, going south-east, a pitch has been taken, and the men are raising some good stones of lead. The repairing of the 40 yard has been completed, and is now throughout in good repair.

CHANTICLEER.—W. Wasley, Feb. 18: Having met with rather an unfavourable change in the ground in the 110 yard level driving south, on the cross lode, I suspended the driving of the end yesterday, and put the men to drive the 110 yard level west on the east and west lode, which is now about 9 inches wide, composed of clay and spar of a very kindly nature for the production of ore.

COLQUITE AND CALLINGTON.—F. Evans, Feb. 15: I was up and underground on Saturday. The shaft is now down from 8 to 9 fathoms below the 20; the lode throughout the sink is large, and rich for sulphur ores, and impregnated with silver-lead; it is a strong, masterly-looking lode, and cannot, in my opinion, fail to be very productive in depth.

CUDDRA.—F. Puckey, Feb. 17: In the 142, west of Walker's shaft, we are driving on the south or tin part of the lode, which for 3 ft. wide in the back of the end is producing rich work for tin, and as we proceed west of the cross-course the tin part is making down further in the end. We are urging on the driving of the end by nine men with all possible speed, in hope by next week to see sufficient of the lode at this point to be able to report its value. In the 130 end, west of shaft, the lode is 10 ft. wide, producing work of low quality for tin.

CWM DARREN.—R. Clocker, Feb. 18: To-day being the day for my weekly report, I beg to inform you that the men are making good progress in sinking the engine-shaft, which is now down between 8 and 9 fms. We have been squaring the shaft during the past week, so that I have nothing to say about the lode more than that last reported. Next week we shall be putting in some holes for sinking, when you shall be advised more particularly. We have taken down the lode in the drivage of the adit, 130 fms. west of the engine-shaft, where we have broken some very good ore; the lode has a most promising appearance, and from present indications I cannot but form a most favourable opinion of the ground to the west of us. Our crushing and drawing go on with regularity, and our dressing is proceeding satisfactorily. We started the round buddle on the slime ore yesterday, which works very well.

DEEP LEVEL.—Feb. 18: The lode in the deep level, west of junction, on Pant-y-Go vein, is 2 ft. wide, composed of limestone, spar, and blende, and producing stones of lead ore; ground hard for exploring. We have taken out two men from this level, and have put them to drive the deep level, east of the junction, on Pant-y-Go vein. The lode at this point is small, being about 12 inches wide, composed of spar, and containing spots of lead ore. In the deep level south-west, on deep level vein, the lode is about 14 in. wide, showing some spots of lead ore, but not much to value. In the pitch over this level the lode is worth 16 cwts. per fathom. The lode in the winze sinking under the 204 yard level, on Pant-y-Go vein, is 2 ft. wide, composed of limestone and spar, and producing stones of lead ore. The two tribute pitches over the 204, east of Eyton's shaft, are each worth 1 ton per fathom; 12 men are employed in these two pitches. In the 204, west of Eyton's shaft, the lode is 18 in. wide, yielding some nice stones of ore; the lode is larger, and looking more promising than for some months past. In the 174 yard level, west of Pant-y-Go shaft, we have got into old workings again. There is about 4 feet of whole ground towards the bottom of the level, where the lode produces occasional stones of ore. The 25 tons of ore sold at Holywell on Thursday last realised 12l. 15s. 6d. per ton.

EAST DARREN.—Feb. 16: In the 116 east the lode is 1½ yard wide; the ground is becoming more settled and favourable for ore, yielding pretty good stones on the south side of the level. In the 104 east the lode is 2 yards wide, not looking quite so well as it was, now yielding 1¼ ton per fathom. The lode in the 92 east is 5 feet wide, producing about 2 tons of ore per fathom. In the winze sinking below the 80, west of Reed's shaft, there is no change in the lode. In the 68 east the lode still maintains its size; not looking quite so well for lead at this point. We intend to put the men to sink a winze to prove the lode in going down, also for ventilation, as the air has become close for working. The tribute pitches throughout the mine are without any change. Our drawing and dressing goes on regularly. Our next sampling, which will be on the 23d inst., will be 75 tons.

EAST GUNNISLAKE AND SOUTH BEDFORD.—J. Bray, Feb. 17: The lode in the shallow adit, east of Gard's shaft, is 4 ft. wide, composed of spar, gossan, and mundic, at present poor. We are making good progress with our surface operations at Impham. I hope to be working in Impham shaft by the end of March next.—P.S. The lode in the Impham adit is 7 ft. wide, producing 5 tons of ore per fathom.

EAST PLYNLIMMON.—J. Paull, Feb. 15: We are still unable to report the satisfactory finding of the lode in the level driving west from the River Wye, owing to the rock as yet only now and then just showing in the bottom of the level. We propose at once costeaning for the lode on the high ground, about 25 fms. in advance of the present end of the level, and also to prepare for sinking a trial shaft on the course of the lode near the bed of the river, in the orey ground discovered there. The deep adit cross-cut north, in the western part of the sett, is making fair progress; ground moderately easy for driving through.

EAST ROSEWARNE.—C. Glasson, Feb. 18: There is no change to notice in any of the points of operation since my last report. The water is all in fork to the bottom of the mine, and the engine working well.

EAST WHEAL BASSET.—Wm. Nancarrow, Feb. 17: No lode cut in the 140 south. The water has been in the bottom of the mine nearly all the time since the last report, but at present is all out, and we hope to make better progress in future. In the 130, east of new shaft, the lode is worth 4l. per fm. for copper ore, and looking promising going east. The 130, west from No. 1 cross-cut, and the 130, east from No. 2 cross-cut, on the south lode, are just communicated, and we shall now begin to drive east from No. 1 cross-cut, and west from No. 2, with all speed, as the holing of this piece of ground has given us good ventilation. The stope in the back of the 125, east of rise, is still looking well, worth 16l. per fm. for copper ore; price for stoping 30s.

EAST WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Feb. 13: We are using every means we possibly can to clear the rise at the 45; the men are working stem time, because we think this to be a most important point in the mine, looking at the appearance of the 55. The lodes in the rise above the 55 and the 55 end, are both looking the same as stated in our Wednesday's report. Having very carefully dialled the mine this week we are led to think that the lode is standing on the north side of the level at the 65; therefore, to be certain, we have placed the men to sink a winze below the 55, to ascertain its true underlie &c., and where we anticipate a good lode; the ore sampled from driving the level over this place made a produce of 17. We have no other change to report, and will send you a detailed report for the meeting.

EAST WHEAL RUSSELL.—William Richards, Feb. 17: We have intersected a lode by shoding at the eastern part of the sett about 4 ft. wide, as far as we can now see it, containing some very fine gossan, quartz, &c. I will send you a full report to-morrow.

— W. Richards, Feb. 18: The middle lode, driving east of the Tunnel level, is 2½ ft. wide, containing quartz, peach, prian, mundic, and little copper ore. The north lode, driving east of the Tunnel level, is 20 in. wide, containing capel, quartz, peach, carbonate of iron, mundic, and stones of yellow copper ore. We are progressing tolerably well in hauling up the pitwork, &c., at Hitchins's shaft. At the eastern part of the sett we have intersected a lode about 4 feet wide, as far as we have proved it, at only 6 ft. below the surface, containing some very fine gossan, quartz, peach, &c., with a little mundic and spots of copper ore. We shall push on the shoding, for proof of other lodes.

EBURY.—F. Kitto, Feb. 12: The lode in the 50 end is still improving; it looks better to-day than I have seen it before, but the ground being hard our progress is slow; the lode is not quite so hard as it has been. Nothing new at New Westminster, everything going on all right. I will write again in a day or two.

— F. Kitto, Feb. 15: There is no change in the 50 end since my last; the lode is just the same. The water is going down fast in the old workings; if it continues to go down as fast this week as it did last we shall see the bottom of the old workings by the end of this week. No change at New Westminster since my last, everything going on all right.

— F. Kitto, Feb. 18: There is no change in the 50 end since my last. The water has not gone out of the old workings yet, but it is getting very low.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Feb. 13: We have intersected a part of the south capels of the lode, with good stones of ore, in the 82 cross-cut driving north from King's engine-shaft; the ground is rather stiff and wet in approaching the lode, consequently our progress is not so fast as we could wish. The lode in the 70, east of said shaft, is 6 ft. wide, yielding 1 ton of ore per fm. The lode in Lampin's stope and winze, going down below the 70, is 8 feet wide, worth 10 tons of ore per fathom. Terrell's stope, in bottom of the same level, is worth 6 tons of ore per fathom. The lode in the 60 east is 6 ft. wide, showing a kindly appearance, with good stones of ore.

GLASGOW CARADON.—W. Taylor, Feb. 16: Caunter Lode: The 78 west is worth 7l. per fm.; a very fine looking lode in easy ground, and likely to improve Stope in back of this level is worth 7l. per fm. The cross-cut south at this level is rather harder, but we are pushing it on by six men as fast as possible; from the appearance of the ground I think we are near Arrol's lode.—Arrol's Lode: In the 65 we are driving a cross-cut on a soft cross-course near the western boundary, from the caunter, to cut the lode, and hope to cut it in about three weeks; this will be considerably west of our present workings. Stopes on this lode are worth 8l. per fm.—Harvey's Lode: The 65 east is worth 8l. per fathom. The 65 west is worth 6l. per fm. A rise in the back of the 52 is worth 5l. per fm. A rise in the back of the 65 west is worth 6l. per fm. Stopes on this lode vary in value from 6l. to 12l. per fm. We are pushing on the cross-cut from this lode to Child's lode, by six men, as fast as possible.

GREAT MONA.—J. Trewin, Feb. 16: The lode in the engine-shaft contains quartz, carbonate of lime and killas, mixed with lead and blende, and is getting more vughy and porous, and is letting out more water. I think that, on the whole, it presents a better appearance than ever for producing quantities of ore.

GREAT NORTH LAXEY.—R. Rowe, Feb. 16: In the 110, or bottom level, we have driven south 3 fathoms and north 4 fathoms; in the former the lode is small and poor, but in the north end we have an improvement; the lode is now 2 feet wide, of an open and porous character, and yielding stones of lead and blende. The 96 end, driving north, is not looking so well as last reported; worth to-day about 5 cwts. of lead per fathom. There may now be a poor piece of ground between this and the newly-discovered ore ground in the 84 north; the stopes in the roof of the 96 are worth 1½ ton of lead per fathom. The 84 end, driving north, and now a little beyond the north shaft in whole ground to the adit, is by far the best end in the mine; the lode is about 2 feet wide, and within the last two or three days greatly improved, chiefly in its general healthy and ore-bearing appearance, and now worth over 1 ton of lead per fathom. I am so far satisfied of the importance of this discovery that I decided to-day to drive the level above towards it, the 73, at once, which, by my calculation, should intersect the run of ore ground in about 10 fathoms driving, when we could open it out by sinking and rising the latter with a view to communicate and bring down the old shaft as the one that must eventually prove the chief medium for developing the mine, and the former to quickly assist us in the returns of lead. The stopes in the 60 south are improved, worth nearly 2 tons of lead per fathom. The 27 end, just over this ground in the 60, is worth about ½ ton of lead per fathom—that is, for the part we are carrying; but the lode here is either very wide or split into parts.

GREAT RETALLACK.—G. R. Odgers, Feb. 13: No. 1 Lode: The lode in the engine-shaft, sinking below the 30, is 18 in. wide, producing good stones of lead—a kindly lode. The lode in the rise above the 30 is 1 ft. wide, and worth 3 cwts. of lead per fm. The lode in the 30 north is 15 in. wide, and worth 3 to 4 cwts. of lead per fathom. The men are desuing the lode in the stope above this level; they will take down the lode on Monday, when you shall know its value. The lode in the 20 north is 18 in. wide, of quartz and mundic, having good lumps of lead—a very promising lode.—No. 2 Lode: The men are making excellent progress with the cutting of the plat and barrow-road at the 40, and they will shortly commence sinking the shaft below that level. The lode in the 40 south is 15 in. wide, with good lumps of lead. The lode in the 40 north is 18 in. wide, containing good lead, worth 3 to 4 cwts. of lead per fm., and the lode is presenting indications of an improvement. The stope above this level will produce from 7 to 8 cwts. of lead per fathom.

GREAT RETALLACK.—G. R. Odgers, J. Harris, Feb. 18: No. 1 Lode: The lode in No. 1 shaft, sinking below the 30, is 2 ft. wide, producing good stones of lead ore—a kindly lode. The lode in the rise above the 30 south is 1 ft. wide, and worth 3 cwts. of lead per fm. The lode in the 30 north is 15 in. wide, worth 4 cwts. of lead per fathom, which is letting out water freely. The stope above this level is worth 4 cwts. per fathom. The lode in the 20 north is 2 ft. wide, which is in two parts, producing good stones of lead.—No. 2 Lode: The shaft-men at the No. 2 engine-shaft have finished cutting plat and barrow-road in the 40, and they will now commence sinking the shaft. The lode in the 40 south is 15 in. wide, principally composed of quartz, with good stones of lead. The lode in the 40 north is 18 in. wide, composed of quartz and white iron, with good patches of lead, worth 3 cwts. to the fathom. The stope above this level is worth from 7 to 8 cwts. of lead per fathom.

GREAT SOUTH CHIVERTON.—J. Nancarrow, Feb. 16: There is a fine looking lode in the 20 east, in which there are spots of lead, and a great deal of carbonate of lime. The 40 east is improving in appearance, and the ground is better. The lode in the 40 west is 3 feet wide, and carries a strong flookan. The part of the lode carried in the 50 west looks very promising, containing blende, lime, &c.; we are pushing this on towards the lode as fast as possible. There is no alteration in any other part of the mine. The water has increased with the late rains, but the engine keeps it pretty well.

GREAT SOUTH TOLGUS.—J. Daw, Feb. 18: We have not made such progress in forking as I anticipated. Last week, owing to having to pack the piston, and repair some of the pitwork, and from continual rain, I do not think we have had the water quicker for the winter.

GREAT WESTERN MINES.—Edw. Rogers, Edmund Rogers, Feb. 17: Fisher's Lode: Thomas's engine-shaft is enlarged and timbered 15 fms. from surface. The rise in back of the 10, below adit, approaching this shaft, is up 1 fm. 4 ft. The 20, east of Pressure shaft, is suspended, and the men put to rise towards a winze sunk from the level above. The deep adit west of Jones's shaft is also suspended, and the men put to rise in the back for ventilation. At the 30, from

surface, driving east of Annie's engine-shaft, the lode is 2 ft. wide, worth 2l. per fathom.—Middle Lode: At the 20, at Curtis's, the shaf men are engaged cutting plat, &c., preparatory to sinking below this level. In driving west at the 20 there is no alteration; the lode is 4 ft. wide, worth 7l. per fathom. At the 20, east of Curtis's shaft, the lode is 3 ft. wide, worth 6l. per fathom. At the 7 fm. level, under adit, the lode is presenting just the same appearance as when last reported on, worth 3l. per fathom.—Caunter Lode: In the winze sinking in bottom of the 7, under adit, the lode is small and poor. At the 17, from surface, the lode is 16 in. wide, worth 3l. per fathom. In the tribute department the men are getting fair wages at their respective tributes, which vary from 6s. 8d. to 15s. in 1l.

GREAT WHEAL BADDERN.—R. Pryor, H. Tregoning, Feb. 13: The ground in the 75 end driving towards the tin lode at Hill Brothers engine-shaft is without alteration to notice during the past week. The ground in the 75, west of the cross-cut, on the lead lode, is favourable for driving, and the lode about 5 ft. wide, containing flookan, spar, blende, and stones of silver-lead. The water is still increasing at this point.

GWYDYR PARK.—W. Smyth, Feb. 16: We have not done much in the shaft at Gwyn Llifion since last report. The parish road was so much out of repair, caused by the late heavy rains, that we were not able to get any coal brought up during the last three weeks, consequently our stock ran out; the water also increased in the shaft, which caused the engine to consume a greater quantity than usual; however, the road is repairing, and I hope to be able to resume work in a few days. In the Vucheslas deep adit end the lode is about 20 inches wide, showing more spar, mundic, blende, and lead than when last reported on—a very kindly end; two of the shaftmen are employed here at present, and we are pushing on towards Harker's lode with all possible dispatch.

HINGSTON DOWN CONSOLS.—James Richards, Feb. 18: In Bailey's engine-shaft, below the 140, the lode is still of good size, 4½ feet wide, and contains a little ore of good quality. In the stope in the back of the 130, east of Bailey's shaft, the lode continues to be worth 3 tons of ore, or 12l. per fathom. In the 85, east of Morris's shaft, the lode is 2 feet wide, composed of capel, mundic, and a little ore. In the 55, east of Morris's shaft, west on the eastern cross-cut, the lode is 3 feet wide, composed of mundic, capel, quartz, and a little ore. In Chevall's rise, in the back of the 55, east of Morris's shaft, and east of the eastern cross-cut, the lode is 2½ ft. wide, and yields saving work for copper ore. In the adit level south fair progress is being made.

LOVELL CONSOLS.—J. Nancarrow, Feb. 13: The lode in the 12 west is improving in appearance, and we expect it will become valuable in driving a little further; the ground too is better for driving. We are making fair progress in clearing the adit eastward, but have met with nothing new in the past week.

MAUDLIN.—W. Tregay, Feb. 13: The lode in the rise in back of the deep and level east will produce on an average 1¼ ton of copper ore per fathom, but it is very irregular, sometimes much less and at other times much more than that quantity. In shooting south on the branches we met with some good ore in the week, but it turned out to be only a bunch, upon the point of intersection of two small branches, and yielded a ton of very good copper ore. We are still shooting out on those branches, which produce good stones of copper ore, and will be intersected by some other branches further south; on their reaching the footwall of the great lode there is every chance of their becoming very productive. Our tramroad through the deep adit level to the shaft is now completed, and we can, therefore, prove the rise to the junction of the lodes as well as the various parts of the great lode at the deep adit level with greater economy and more rapidly than heretofore, in consequence of the cheap transit for the ore and debris when broken. We purpose sending away about 10 tons of copper ore next week to Par, to offer for sale.

MINERA UNION.—W. T. Harris, Feb. 18: Low's Shaft: The lode in the 60 yard level north is 2 ft. wide, rather less productive than last reported, but very promising. The ground in the cross-cut west is favourable for progress, and congenial for lead.—Boundary Shaft: The ground in the 60 yard level north has undergone a decided change, and now consists of limestone and chert. A good deal of water issues from the forebreast. The ground in the cross-cut to the Red vein is the same as last reported—black limestone. There is no other change.—P.S. We have to-day weighed off 9 tons of blende, which realised 3l. 7s. 6d. per ton, purchased by Messrs. Kenrick and Son.

MOUNT PLEASANT.—W. Wasley, Feb. 18: Last Saturday being our setting-day, I set the 120 yard level to drive west of the cross-cut, north of Jenkins's shaft, by two men, at 17s. 6d. per yard; and set two men to raise ore at the 90 yard level, at 9l. per ton for 2 tons. At Bright's shaft I set four men to raise ore to the west of the shaft, at 8l. per ton for 4 tons; and set two men to raise ore south of the shaft, at 8l. per ton for 2 tons; I also set two men to drive east of the cross-cut, north of the shaft, where the ground is very favourable for the production of ore. We commenced yesterday to dress up a little lot of ore, which will be ready for sale by the end of next week.

NEW GREAT CONSOLS.—R. Pryor, R. Trathen, Thomas Bennetts, Feb. 17: We set the following bargains on Saturday last:—No. 1 stope, in back of the 64, to two men, at 9s. per ton for copper and mundic; the lode is worth 10l. per fm. No. 2 stope, in back of ditto, to two men, at 8s. per ton; the lode is worth 12l. per fathom. No. 3 stope, in back of ditto, to four men, at 8s. per ton; the lode is worth 10l. per fm. No. 4 stope, in back of ditto, to four men, at 9s. per ton; the lode is worth 12l. per fm. No. 1 stope, in back of the 50, to four men, at 8s. 6d. per ton; the lode is worth 12l. per fm. No. 1 stope, in back of the 40, to two men, at 9s. 6d. per ton; the lode is worth 9l. per fm. No. 2 stope, in back of ditto, to six men, at 6s. 6d. per ton; the lode is worth 14l. per fathom. No. 1 stope, in back of the 30, to two men, at 9s. per ton; the lode is worth 9l. per fm. No. 2 stope, in back of ditto, to two men, at 9s. per ton; the lode is worth 8l. per fathom. No. 1 stope, in bottom of the 20, to three men, at 8s. 6d. per ton; the lode is worth 10l. per fm. No. 1 stope, in back of ditto, to three men, at 9s. per ton; the lode is worth 8l. per fm. No. 2 stope, in back of ditto, by two men, at 9s. per ton; the lode is worth 9l. per fathom. We shall set a cross-cut to cut through the lode in the 86 in the course of a few days. We have resumed the sinking of Rendle's shaft, but the men have not as yet completed their former contract. Our pay and setting went off very satisfactorily.

NEW PEMBROKE.—F. Puckey, J. Puckey, Feb. 17: The mine is again in fork, and all our underground operations in regular course of working. At the new engine-shaft we have cut the plat in the 30, put in penthouse, and sunk the shaft 2 fms. below the 30; the ground in the shaft is still favourable for progress. In the 75 fm. level end, east of the engine-shaft, the lode is at present disordered, in consequence of our having passed through a small cross-course; the end is now full of branches, containing a little tin, and is letting out a great deal of water. In the 75, west of the shaft, we are driving a cross-cut north to intersect the lode west of the cross-course; the ground is easy for exploring; cost for driving, 65s. per fm. In No. 1 stope, in the back of the 75, west of the western winze, we have intersected a slide, which has hove the lode; under this slide the lode was 2 feet wide, and worth 10l. per fm.; we have not yet seen it above the slide, but have every reason to expect it will there be found to be improved in value. In No. 2 stope, east of the same winze, the lode is 2 ft. wide, and worth 12l. per fm. In No. 3 stope the lode is 4 ft. wide, and worth 16l. per fathom. In No. 4, or eastern stope, the lode is 3 ft. wide, and worth 15l. per fm. Our operations both underground and at surface are being urged on as rapidly as possible.

NEW TRELEIGH.—S. Michell, Feb. 18: I am pleased to say that I can report more cheeringly than for some time past. The lode in the 78, east of new shaft, is worth 14l. per fathom. The stope in back of the same is worth 10l. per fathom. The rise in back of this level will yield 2 tons of ore per fm. There is every probability of the 78 end west draining the winze in the 70 in the course of a day or two, as we cut a large stream in this level this morning. The lode in the back of the end is 14 in. wide, worth 15 cwts. of ore per fathom, and improving. I have no doubt when the end is extended under the winze the lode will be found equally as good as in the winze—producing from 2 to 3 tons of ore per fathom. We are getting on as fast as possible dressing the ore.

NEW WESTMINSTER.—F. Kitto, Feb. 18: There is not much change since my last. The 80 end, driving west, is a little improved. I am happy to say everything is going on all right.

NEW WHEAL TOWAN.—R. Pryor, Feb. 17: The lode in the rise in back of the deep adit level is 18 in. wide, and worth full 1 ton of ore per fathom; set again on Friday last to four men, at 5l. per fathom. Finding that this part of the lode is standing all to the south of the old level, we shall commence to cut in in that direction, about 10 fms. east of the rise, and if the lode is found as good as at this point we shall be able to set several tribute pitches.

NORTH POOL.—J. Vivian and Sons, Feb. 17: The lode in Ballarat shaft has improved since our last; it has not looked so well as at present for some time past. We have nearly reached the 50, and anticipate making discoveries of value on driving at this level. We sold last week 18 tons 15 cwts. of good copper, realising 106l. 5s. 10d.

NORTH RETALLACK.—George R. Odgers, J. Harris, Feb. 18: The water is again going back, but not sufficiently low to commence operations.

NORTH ROSKEAR.—R. Goldsworthy, R. Angove, Feb. 17: The 216, east of Pearce's shaft, has been extended about 6 feet; the lode has fallen off in value, now worth 5l. per fm. The winze sinking below the 205, east of Pearce's, has been sunk about 7 ft.; here the lode is small and poor. Doctor's shaft has been sunk about 6 ft.; here the lode is improving in size, but still poor. The 140 fm. level cross-cut, south from Wheal Seton, has been extended about 5 feet. Our tin department is without alteration. All the points in operation we are pushing on as fast as the nature of the work will allow.

OKEL TOR.—John Rodda, Feb. 18: The lode in the rise in back of the 80 east is 5 ft. wide, and consists of peach, quartz, mundic, and occasional stones of ore. The stope in back of this level is worth from 2 to 3 tons of ore per fathom. The lode in the 80, west of the cross-cut, is 3 ft. wide, and looking very promising, worth from 2 to 3 tons of ore per fathom. We have commenced a rise in the back of this level against the 65 winze. In the 65, west of Gerry's cross-cut, the lode is still worth 2 tons of ore per fathom. The winze in the bottom of this level is suspended for the present, and the men put to stope a piece of ground, to admit of our continuing the level on eastward. The lode here is worth 4 tons of ore per fathom. There is a beautiful channel of ground in the 65 fm. level cross-cut, south from the footway winze, being much mixed with prian, and water issuing therefrom. We have two pitches in the back of the 80, on the north lode, yielding 3 tons of ore each per fathom. One in the back of the 65 is yielding 2½ tons; one in the back of the 50, 2½ tons; and three in the back and bottom of the 50, on the south lode, yielding on the average 3 tons of ore each per fathom.

PEDN-AN-DREA UNITED.—W. Tregay, J. Thomas, Feb. 13: Sump: The water went in fork in the early part of the week, and we immediately resumed the driving of the bottom, or 140 west end, where the lode is improving, being now worth 20l. per fathom. We have been necessitated to take the men from the 130 west end to fix large air-pipes in the 90 north cross-cut, hence no progress has been made in this end; neither have we yet resumed sinking the 120 west winze, on account of the water. We hope to resume the sinking next week. The lode in the 120 east end is worth 12l. per fathom. In the 120 north cross-cut the ground is favourable for driving, and good progress is being made. The lode in the 100 east rise produces a little tin, not to value. In the 68 east we have again a run of low quality tinstone, which must be got away before we can reach the superior quality eastward.—Cobbler's: Martin's Lode, 120 west end: The lode here is worth 5l. per fathom.—North Lode, 90 west end: The north part of the lode which in the two levels above, as well as in this level, has been found richest near the cross-course has fallen off in value, while the south part, which appears to be the permanent part of the lode in the level above, and which seems to improve in that level as we get away from the cross-course, has improved here also; the end is now worth 50l. per fathom. In the 55 west, at a corresponding distance from the cross-course, the lode fell off in value from 25 to 15l. per fathom, and from that point began to improve; the 55 west end being now worth 40l. per fathom. The lode in back of 90 is worth 100l. per fathom. The lode in the bottom of the north shaft, sinking below the 55, is worth 30l. per fathom. The lode in the 47, west cross-cut, is worth 25l. per fathom, and more lode still standing further north. The pitches in 55, 47, and in the upper levels are producing their full quantities of tin, and promising well for continued production. We sold this day 8 tons 6 cwts. 0 qr. 22 lbs. of black tin for 556l. 11s.

PENHALE UNITED.—R. Pryor, H Bennetts, J. Pryor, Feb. 16: We are getting on well with completing Phillips's engine-shaft, and hope to be able to resume sinking the same below the 90 in a fortnight's time, which can be carried out with a 10-in. lift. The lode in the 90, north of this shaft, is 18 in. wide, and worth 6 cwts. of lead per fathom. In this level, driving south of shaft, the lode is improving in its appearance and character, and producing some good lead.—Hall's Shaft: The lode in the 90, driving north of shaft, is 2 feet wide, and worth 10 cwts. of lead per fathom, with a good appearance. The shaftmen are still engaged in clearing and timbering this level south of shaft, and cutting plat. The lode in the 80, driving north of shaft, is not quite so good, being split into two parts by a horse of killas, and only worth at present 7 cwts. of lead per fathom, but judging from present indications it will shortly improve. The lode in the winze sinking below this level is 1 ft. wide, and worth 4 cwts. of lead per fathom. No change to notice in any other part of the mine since our last report. Our machinery is in good condition and working well.

PENHALE WHEAL VOR.—Wm. H. Martin, Feb. 17: In the engine-shaft, sinking below the 94, the ground is favourable, and the men are making good progress. The south lode continues its underlie towards the main lode.—Penhale Lode: The lode in Ritchie's shaft, sinking below the 60, has not yet become settled; there are several branches running through the shaft, and the ground is a little easier.

PENHALLS.—S. Bennetts, W. Higgins, Feb. 13: There has not been any lode broken in the 70 since setting-day, the shaftmen having required the room. The downright lode has not been cut as yet in the 60 south. The lode after being slightly heaved in the 60 west, has again made its appearance. In the 60 cross-cut north there is an abundance of spar in connection with the cross-course, and some good stones of tin. At the Pink Mine the only change during the week has been a slight falling off in the lode in the Shop shaft, which is probably owing to another small gossan having crossed it.

PRINCESS OF WALES.—T. Foote, G. Rickard, Feb. 15: We have this day set the engine-shaft to sink under the adit level 9 ft., by a full pare of nine men, to cut plat, put in bearers and cistern, fix standing lift, and make everything complete for sinking Harris's shaft under the adit to the satisfaction of the agents, for the sum of 37l., the men to pay their own cost. We calculate this will take a month from this date, when we should strongly recommend driving a cross-cut north to intersect the main lode, the same as the adit level is driven on; should the lode prove satisfactory at this point, and which we have no reason to doubt, we can then drive east and west on the same, and also bring up the adit level, which has been suspended, owing principally to the heavy cost which has been incurred while putting up the engine. We have every reason now to state that the heavy cost is over, having a good engine, and that the future cost will be in sinking and driving levels on the lode or lodes, and that you have every chance of opening up a good and lasting property.

—T. Foote, G. Rickard, Feb. 17: No alteration in the mine since our report on Monday last.

PROSPER UNITED.—John Nicholls, Feb. 12: We sent you a report of these mines yesterday, by which you will see that some of the ends and stopes are not so good and others are better than when the last general meeting was held. There are several important points to be proved in the next six months, and I am of opinion good discoveries will be made.

ROARING WATER.—H. Thomas, Feb. 16: The caunter lode is about 3 ft. wide; we have driven from the point of intersection 3 fms. 5 ft. From the nature and composition of the caunter I think we may shortly expect to see the western side of Grady's lode; We are getting rich copper ore in and about the caunter, a box of which I intend sending by the London steamer on Thursday; I have set 3 fathoms or lode to six men, at 35s. per fathom. I have employed two miners and two labourers to prepare to sink on the Orchard lode below the 45; in all probability we shall raise good ore at this place, as there is a good branch of mineral gone down into the bottom of the level.

ROYALTON.—Wm. Kitto, Feb. 18: I have spent two days here, and after fairly and fully examining the whole affair, I feel pleased to be able to endorse my previous statements—that in Royalton you possess a very valuable property; and your manager at the mines is, in my opinion, taking proper steps to bring it to a profitable issue, by putting down two new substantial incline shafts, prosecuting his levels, and fixing additional new machinery, for the speedy and economical treatment of the immense quantity of ore stuff contained in the mine; this being done, I fail to find a shadow of a doubt of your getting profitable returns for many years to come—in fact, I may repeat that the quantity of ore stuff is really inexhaustible. The late floods, which have acted so badly against mining throughout the whole kingdom, have also been felt at Royalton, and did some considerable damage to the deeper workings; this, however, will be repaired in a few days, and such steps are now being taken as, I think, will prevent a reoccurrence of the same. As may naturally be supposed, they interferred very considerably with the surface operations, and prevented the erection of the new machinery. The weather now appears to be holding up, and this work will be carried on as fast as possible. In conclusion, I feel convinced that when your mine is properly laid open, and your machinery in full operation, you will find it rank with the best tin mining properties in Cornwall.

SOUTH CONDURROW.—J. Vivian and Son, W. Williams, Feb. 13: We have not yet been able to drain the water below the 82, having had again heavy falls of rain. We fully expect, however, to have the water drained to the bottom of the 93 in the coming week. In the 72, west of King's shaft, the tin lode continues of much the same character and value as when last reported. In the 61, west of King's shaft, the lode is improving in character. There is no alteration worthy of notice in the stope in the back of this level; lode about 20 ft. wide, and worth from 50l. to 60l. per fm. We have commenced cross-cutting to the tin lode at this level at about 5 fms. east of the first cross-cut, and are cutting through a lode of much the same quality as at the other points where it has been seen. In the 51, east of Tye shaft, the lode is 4½ ft. wide, and presents a favourable appearance for copper and tin. There is no alteration requiring notice at other points.

SOUTH DARREN.—J. Boundy, W. H. Boundy, Feb. 15: The lode in the 70 west is 2½ feet wide, worth for lead and copper ore 12l. per fathom, with every appearance of further improvement. The part of the lode being carried in the 60 west is at present small; we propose here driving a cross-cut for a short distance north to see if any more lode is standing in that direction, west of the cross-course mentioned in our previous reports. In the 50 west, the men since setting-day have been engaged in cutting out the side of the level, and laying open the lode making preparations for stoping. The men having completed cutting the ground for tackle, &c., in the 60 west, we have set the winze to sink below this level, to complete it to the 70, to six men, at 10l. 15s. per fathom. There is not much change in the stopes to remark upon. We sampled on Saturday last (computed) 20 tons of best copper, and 23 tons of seconds copper.

SOUTH HERODSFOOT.—W. Goldsworthy, Feb. 18: The ground in the cross-cut is still of the most promising character, and letting out a little more water. The engine and pitwork are in good order, and keeping the water comfortably.

SOUTH MERLLYN.—H. R. Harvey, Feb. 17: The end driving south at the 40, from Bartlett's shaft, is progressing favourably; the lode has greatly improved for ore, and is now worth about 7l. a fathom; it is split up into strings of ore all over the end. The pitches in the back of the 30, north of Harvey's shaft, are looking well; there is a branch of lead about 4 in. wide in the back. We are preparing to drive the 40 north to get under the ore ground discovered at the 30; when this operation is completed we shall be enabled to take away the ore at a good profit.

SOUTH WHEAL GRENVILLE.—G. R. Odgers, Wm. Bennetts, Feb. 13: In the 42 cross-cut south we have met with an increased quantity of water, which is very strong, leading anyone to think that we are approaching a lode, and the ground also indicates a lode near at hand. We hope we may be rewarded with a good lode.

ST. JUST AMALGAMATED.—R. Pryor, W. White, R. Wearne, Feb. 15: The lode in the 110, driving east of Saveall's engine-shaft, is worth 4l. per fathom. The lode in the 100, driving east of shaft, is worth 5l. per fathom. In this level driving west of shaft the lode is also worth 5l. per fathom. The lode in the 90, driving west of ditto, is worth 6l. per fathom.—Owl Lode: The lode in the 40, driving north of Reddipper shaft, is worth 4l. per fathom. The lode in the 20, driving north of ditto, is worth 7l. per fathom. The lode in the 10, driving north, is worth 6l. per fathom. The lode in the 10, driving north, on branch, is worth 5l. per fathom.—Wheal Widden Lode: The lode in the 20, driving east of Reddipper shaft, is worth 6l. per fathom. The lode in this level, driving west of the cross-cut, is worth 8l. per fathom.—Pryor's Lode: The lode in the 62, driving west of the cross-cut, is worth 3l. per fathom. The lode in the winze sinking below this level is worth 8l. per fathom.

SUMMER HILL.—W. Wasley, Feb. 18: There is no alteration of importance in the ground or flat in the south-west level, driving towards Wynne's shaft, since last reported on. I am sorry to say that we have still a very hard bed of ground in the bottom of Wynne's shaft, which is making against our progress in the sinking; but I think the bed is not very thick, and that we are not far from the flat.

TAMAR VALLEY.—J. Goldsworthy, Feb. 18: In the 57, driving south, the lode is 4 ft. wide, composed of horn, fluor-spar, mundic, and producing rich stones of silver-lead ore—a promising lode. In the 57 fm. level cross-cut, driving east of Weston's engine-shaft towards the Tamar Valley lode, good progress is being made. The laying of the tram-road in the 27 is being forced on with all speed. The several pitches throughout the mine are looking promising. The surface work, together with the dressing-floors, is in a forward state.

TREREW.—Feb. 17: The engine-shaft is now nearly 15 fms. below the 20; the ground is very good, and the water pressing very strong from the west end of the shaft. From this we consider the lode is close at hand, so, in order to avoid any risk, we have put the shaftmen to prepare to fix the large lift below the 30. The cistern is in its place, and the rods are all down, and nearly connected; we shall push on day and night until the lift is completed. We cut through the lode in the 20, south of shaft; it is 9 ft. wide, principally spar; there is a little of the same kind of mundic we had in the first cross-cut, with spots of lead. It is not near so hard as where we cut it first, but still too hard to drive in with so much water. We have now set the men to drive south in killas, by the side of the lode, at 4l. per fathom. The ground in the 20 end north is just the same as it was on setting-day; price 55s. per fathom.

VIGRA AND CLOGAU.—W. J. Cooke, Feb. 18: St. David's Lode, No. 2 Mine: During the past week visible gold has been broken from the stope west of No. 6, but the lode having become very disordered, the men have been put to stope on the east side of No. 6 shaft, where in a few days I hope to break some visible gold. The lode in the level driving east towards the great cross-course, is from 4 to 5 feet wide, and has little altered. The lode in the stope in the back of this level continues to open out, is over 6 feet wide, and a little improved. The stuff being picked over produces some stones of visible gold. The 16 heads of stamps continue to do good duty. All other work progresses as usual.

WEST DRAKE WALLS.—T. Gregory, Feb. 16: In the 40 west we are driving by the side of the lode, which is of a promising character, and producing stones of copper ore. The ground in the 40 fm. level cross-cut south is favourable for driving, and fair progress is being made.

WEST GODOLPHIN.—Joseph Vivian and Son, John Pope, Feb. 17: In the 10 north, west of Pressure shaft, the lode is 2 ft. worth from 6l. to 7l. per fathom. We have not yet commenced sinking below the 10, as we found it necessary to stope a little more of the end of the shaft than we anticipated; the lode in this stope is worth 15l. per fathom.—South Hope Lode: In the middle adit level, driving east and west of the caunter, the lode is 18 in. wide, saving work for tin. The stopes in the back of this level are worth 6l. per fathom. We shall resume sinking the Pressure shaft in the course of a few days.

WEST WHEAL TOLGUS.—Feb. 17: The water is now drained 5½ fathoms below the 40 fm. level, and the engine is working well. The men are securing and covering over the adit shafts that we opened, and we think by the end of the week this work will be completed, except the carting of some stuff from the fields that has been taken out of the adit. There is nothing new to report in Richards's shaft; the lode is from 3 to 4 ft. wide, consisting of killas, spar, and spots of ore.

WHEAL AGAR.—E. Rogers, Feb. 17: We expect to finish the plat in the 170 next week, when we shall resume the sinking of the shaft below that level, and also cross-cut to intersect the lodes. We are getting on as fast as we can towards completing the plat in the 130 fm. level engine-shaft, but the increased quantity of water, consequent on the heavy floods of rain, has been very much against our progress, the water, however, is all in fork, and things in good order.

WHEAL GRENVILLE.—G. R. Odgers, W. Bennetts, Feb. 13: The lode in the 130, west from the new shaft, is 18 in. wide, and producing low stamping work. The lode in the 120 west is 3 feet wide, and worth 8l. per fm. We have nearly holed the rise above the 110; this will enable us to sink the bottom of the 100 more advantageously. The lode in the 100 east is improving; there is a rich leader of tin on the footwall worth 6l. to 7l. per fm., and seeing this is getting under the run of the tin ground we have above, we believe that we shall find a greater improvement here. The lode in the 90 east is worth 10l. to 12l. per fm. The men are making good progress with the 90 cross-cut, the ground being as favourable for the production of tin ores as we can wish to see. The lode in the 80 west is 2½ ft. wide, and worth 8l. per fm. The lode in the 66, west from the north shaft, is worth 10l. per fm. No lode has been taken down in the 66, west from the new shaft. From the above you will readily perceive that our ends are a little more productive.

— G. R. Odgers, Feb. 18: Everything is progressing satisfactorily at this mine, but we have no change to report, more than in the 90 fm. level cross-cut we have met with another dropper dipping north, containing good tin.

WHEAL KITTY (St. Agnes).—Wm. Polkinghorne, S. Davey, Feb. 13: In the 82, driving west of Holgate's shaft, the lode is worth for tin 7l. per fm.—New Shaft—Pryor's Lode: In this shaft, sinking below the 94, the men are making good progress. In the 94, driving west of shaft, the lode is worth for tin 25l. per fathom. In the 94, driving east of shaft, the lode is worth for tin 13l. per fm. In the 82, driving west of shaft, the lode is 2 ft. wide, and worth for tin 14l. per fathom. The lode in the 82, east of shaft, is at present small and poor. The lode in the winze sinking below the 82, west of shaft, is 2 ft. wide, and worth for tin 14l. per fm. In the 65, driving west of shaft, the lode is at present poor.—Caunter Lode: In the 82, driving north of Pryor's, the lode is 3 ft. wide, and worth for tin 12l. per fm. In the 44, driving east of cross-cut, north of Pryor's, the branch is producing good work for tin.

WHEAL MARY ANN.—P. Clymo, J. Harris, J. Stevens, J. Skeat, Feb. 17: The cross-cut at the 240 is extended 9 feet towards the lode. There is nothing new in the 230 fm. level north since last reported on. In the same level south the lode is 2½ feet wide, worth 10l. per fathom. There is no change to notice in the 220 north. In the same level south the lode is 2 feet wide, worth 16l. per fathom. There is nothing worthy of notice in the 210 north since our last. In the same level south the lode is 1½ foot wide, producing a little ore. In the 200 north the lode is 1½ foot wide, worth 4l. per fathom. In the same level south the lode is small, producing a little ore. In the 190 north the lode is 2 feet wide, producing stones of ore. The 180 north is at present suspended. The stopes and pitches are producing much as usual. We sampled on the 11th inst. two parcels of silver lead ores.—No. 1 (computed) 55 tons, and No. 2 (computed) 56 tons, for sale to-morrow.

WHEAL MARY FLORENCE.—Wm. Verran: In the 15 east the present end is nearly 30 fms. west of the first discovery, consequently we have yet that distance to drive to get under the perpendicular, and there is every reason to believe it extends east as well as west of the point where it was first discovered at surface. I look forward to a long run of productive ground in this direction. We have commenced driving the 25 east by a full pare of men to get under the 15 as quickly as possible, and think we shall get into ore by ground in about 7 fms. driving. We are now quite through the cross-course in the 15, and the copper lode is again making its appearance, and we shall soon get under the productive ground driven through in the deep adit. We have several tons of ore at surface from the 15 east, and are preparing another parcel for the market. Our prospects were never so good as at the present time, and I was never so sanguine of having a permanently profitable mine.

WHEAL MARY FLORENCE.—W. Verran, Feb. 18: In the 25 fm. level, west of Saw's shaft, we have cut through the lode, and find it to be about 5 ft. in width, but at present unproductive, not being far enough west to take the shoot of ore driven through in the level above; we shall, therefore, drive on a few fathoms further by the side of the lode, so as to get under the ore ground as quickly as possible. In the 25 east we are also driving by the side of the lode for dispatch, to get under the same run of ground we have in the 15 fm. level east, and which is here producing 3 tons of copper ore per fathom. In the 15 west we are through the cross-course, and shall soon be under the point where the deep adit level was so productive, and have reason to believe this level will be still more productive. We have a stope in the back of the 15 yielding about 2 tons of ore per fathom. We are opening out the mine rapidly both east and west of shaft, and our prospects for a permanently profitable mine were never so good as now.

WHEAL TRELAWNY.—W. Johns, T. Grenfell, J. Pryor, Feb. 16: We have in Trelawny's engine-shaft as beautiful a killas as can be seen, and the sinking is going on satisfactorily, taking the large quantity of water we have had of late to contend with. In the 210, north of shaft, we shall drive on by the side of the lode for several fathoms further before cutting into it. No lode has been taken down in the 210 south since last reported on, then worth 6l. per fm.; this lode will be cut into against our next setting-day. In the 210 north we have communicated the end with the winze sunk below the 196, which has caused a good ventilation; we shall now at once commence to stope down the lode, and where left off in the winze was worth 8l. per fm.; the end can now be pushed on with greater advantage than heretofore. At Smith's engine-shaft the water is in fork to the bottom of the mine, and the driving of both ends resumed. In the north end the lode is worth 7l. per fm.; and in the south end it is 2 ft. wide, spotted with ore, but not rich. In the 196, north of Chippendale's, we have holed the rise to the bottoms sunk below the level over, which has opened out ground worth 25l. per fm. We shall now resume the driving of the end on tribute at 5l. per ton. We shall sample this week 83 tons (computed) of crop silver-lead ore, and 61 tons (computed) of second quality.

WYE.—John Paull, Feb. 15: Murchison's shaft is now sunk below the surface 13 fathoms; the casing and dividing is completed, and the sinking again going on favourably. In the adit level, driving west, the part of the lode being carried is without ore at present, and in a little further driving it will be again necessary to put a short cross-cut through the lode to prove its character and value on the north wall.—Surface: The wheel-pit is being built as fast as possible, and everything is in preparation for the erection of the machinery. We are pushing forward as speedily as the present very wet weather will allow.

FOREIGN MINES

THE ALMADA MINES (Mexico).—As these mines are likely to be introduced to the notice of the public in the course of a few days, it may be mentioned that a letter was received by the last mail from Mr. A. Patchin (of the Tirito Mine, Alamos), in which he states that the Tirito Mine is about going into successful operation, and that it is hoped the Almada boundary will be reached by May or June, and in this way fully prospect the Almada Mine, called Providencia. The present work will develope this mine 160 feet below the present explorations, and on a level with the Tirito tunnel, thus showing the quantity and quality of the metal in the Providencia, above the tunnel; and by sinking a shaft from the bottom of the tunnel a certain depth of the vein may be reached with no trouble from water, from the fact that the tunnel will drain all surface water. The low ley of metal in the Tirito averages by working $55 per ton; the Potanka metal has not yet been worked, but it assays from $200 to $1400.

IMPERIAL SILVER QUARRIES.—Lewis Chalmers, Jan. 18: 10 feet of tunnel was made last week. During part of the week the rock was so soft—an agreeable change—that I had to put on an additional man to put in timberz and run out dirt. On Friday it began to look harder again, but it drills better. Send any experienced miner, in whom you have confidence, and he will tell you that you have a splendid property if you have the means to develope it; without this it is like an uncut diamond; it may be of the finest water, but you have not the wherewithal to prove it; or, like the original owners of the Devon Great Consols, you get discouraged just on the point of production, and like them, when within 6 feet of the finest mine in Cornwall, allow it to pass into other hands. A similar striking case occurred in Grass Valley, California, where, after working a long time, and expending many thousand dollars, the then proprietors of the now famous Hayward Mine, losing heart, abandoned it—all save the man whose name it bears—who, believing in his mine, sold every article he had until he could not get credit for a sack of flour, and was at length rewarded by the possession of the richest gold mine in California. Now that everything is in such excellent order, it would be a thousand pities to forsake the claim before reaching even the first ledge, and without sinking, as I recommended at first, on either the "Vortex" or "Esmeralda," the one the continuation, I think and believe, of the "Morning Star," the other of the "Tarshish." As I said before, I could have wished our location had been inverted, or similar facilities afforded by it to run a tunnel from the other side, simply because the outside indications are so magnificent there, and that the "Morning Star" has so far proved the one, and if I am right in my conjectures, the "Tarshish" the other. I am still of opinion that all our ledges are in true fissures, not segregated or pinching out. Our tunnel will not miss "Triumph," although it may be twisted by the canon (ravine), and placed thereby farther off than the surface leads me to expect. [I have no doubt of its permanency at depth. I hope our friends will have more sense than stop work till they reach the "Florence."] Finally, let me assure the directors that the most rigid economy will be preserved. Everything is in first-rate working order; the new blacksmith's shop and dump extension (to save bridge) is completed; the track laid and ironed to within a few feet of the face; substantial timbers where necessary; the timber has been on the ground for this purpose for some time (what was got for the bridge); sleepers for a double track when required; 630 feet of strong galvanised iron ventilation-pipe, firmly fixed along the roof of the tunnel with iron brackets, painted against rust, and connected with 55 feet of 12 by 12 feet chimney, strongly fixed to the rock outside by iron stanchions bedded in molten lead; the water from the tunnel is utilised by being led through the blacksmith's shop to tank for his use, and in case of fire; everything, in short, as it ought to be; and above all, an excellent mill site and water privilege, with power for any number of stamps, secured to the company when we want it; a good dwelling-house, office, assay office, and assaying apparatus complete; and 480 feet of tunnel, 6 by 7 feet, through very obstinate rock. These arrangements being complete, all money goes into the tunnel. I need scarcely add that all work has my own constant personal superintendence and direction, and that a man found trifling is paid off instanter, but I am happy to say that I have had this to do only in four cases.

GONNESA.—R. W. Rickard, Feb. 7: San Giovanni Mine: The sinking of Caroline's shaft is going on regularly; it has attained a depth of 24 metres under the 30 metre level. The 30 metre level west is still in unproductive ground. Taylor's level west is being driven on a lode that yields 2½ tons of ore per fm. The same level west is in promising ground, but is almost unproductive at present. There is nothing new to mention in the cross-cut south at Victor Emanuel level. The stopes and tribute pitches have somewhat improved during the past fortnight, and are looking well at this time.—San Giovanneddu Mine: The lode in Nicolay level west has been found to make a sudden turn to the south-west, but is gradually resuming its usual direction. This end produces 1 ton of ore per fathom. The 30 metre level west, on No. 1 lode, is in soft ground, composed of clay, with lumps of limestone and lead ore; it produces of the latter about 1½ ton per fathom. The shaft which has been sunk under the 30 metre level has reached its required depth, 23 metres; a cross-cut has been made north 9 metres, and the No. 1 lode intersected. In the eastern end the lode yields

3¼ tons of ore per fm., and in the western end it yields 4 tons per fm. The Fortuna cross-cut adit was extended 20 metres during the past month. The tribute pitches throughout the mine are looking fairly.—Monte Cane Mine: Our sutwork operations in this mine are confined to the driving of a deep adit level west, on the contract lode, to pass through several small shoots of ore worked on in Tommaso level. It will require four or five months before this level enters the productive ground. Our tribute pitches are looking much the same as usual. We have about 35 miners at work, at an average tribute of 100 frs. per ton of ore, 75 per cent. lead.—Acqua Resi Mine: The San Georgio level, on the western lode, has entered productive ground for calamine; the lode is 3 ft. wide, and all good ore. The 16 metre level cross-cut has not yet intersected the main part of the lode. The stopes are turning out fair quantities of calamine, at moderate prices for breaking. The 16 metre level, at Campo Spino, has been extended 30 metres through a splendid piece of ore ground; it has now entered a poor section, corresponding with a similar piece of ground passed through for 8 metres in length by the Campo Spino level, after which good ground was again entered. We expect the 16 metre level to enter productive ground again in the course of a few days. In this part of the mine also the stopes are turning out well. In order to raise the ore from the Campo Spino level to the road we are constructing an incline railroad, which, with a whim, will enable us to keep up a full supply of ore for two furnaces from this part of the mine also. We have borrowed for the present a large furnace from the Iglesias Company, and shall now be able to increase our returns (or rather in the course of ten days) from 24 to 40 tons per day.—Gutturu Pala Mine: The carriage of ore to the sea from this mine has gone on very slowly thus far, the road being in a bad state. The little furnace is in course of construction, and will be ready for calcining this month.

RHENISH CONSOLS.—G. Sweet, Feb. 16: Christiania: The end driving east on the course of the lode, in the 20 lachter level, will now afford 12 centners of lead ore per lachter. The western end in this level is at present poor. The stope in the roof of this level, and east of Pittar's winze, has improved, and will now afford 2½ tons of lead ore per lachter. The other points in operation are without change. Fair progress is being made with the sinking of the shaft.—Blicbach: The end driving west, on the middle lode, in the 10 lachter level, will offord 15 centners of lead ore per lachter. The stopes and tribute bargains are the same as last reported.

CHONTALES.—The directors have issued a further circular to the shareholders, urging them without delay to take up their quota of debentures. On 10,000*l.* being subscribed Mr. Belt will return to the mines, and carry out the plan recommended in his report; otherwise, the directors fear that all their efforts will be unavailing for the preservation of the property. The amount subscribed for since the meeting, on Feb. 2, is at present only a little over 5000*l.* The directors, therefore, are urgent in their solicitation that every shareholder who has not taken up his full quota of debentures will comply with this final appeal, so that no effort may be spared to preserve the property intact to the shareholders.

GOLD MINING IN ITALY.—It is satisfactory to find that the different mines belonging to the Pestarena United Company are opening out most satisfactorily. Up to the present time the produce (notwithstanding the unusually severe weather in Italy), has exceeded the estimates of the company's engineer, Mr. Arthur Dean. It may be added that a large proportion of the new capital has been subscribed for, and it is anticipated that the whole will be taken up in time to permit the new works recommended by the engineer being commenced by the opening of spring.

GOLD MINING IN BRAZIL.—The directors of the Don Pedro Company have received the following telegram:—Produce for December, 21,499 oits.; weighed to Jan. 18, 8399 oits.

COAL IN CALIFORNIA.—An important discovery of coal has been made at Argenta, in California, situated about 370 miles from Sacramento. This coal is said to be of excellent quality, and will no doubt be of great services to the American steamers that run from San Francisco to China and Japan.

THE COAL FIELDS OF LABUAN.—The island of Labuan is described by Mr. Lumsden, of the Oriental Coal Company, as being built up of a great mass of coal measures, incorporated with the new red sandstone, and forming an elevated segment of a large coal basin, the two ends and opposite sides of which extend into the sea. There are seven seams or outcrops, ranging from 1¼ ft. to 11 ft. in thickness. Two seams are 4000 yards in length, with an aggregate thickness of 15 feet of clear coal; and to these two seams all mining operations have hitherto been confined. They constitute the upper section in the smaller division of the island north of the high sandstone ridge. The lower section in the larger division of the island, south of the ridge, embraces three outcrops, each 4 feet thick, which have never been proved in depth. From the strike of the strata it is inferred that within the compass of the island there must be at least 7000 yards in length of the three seams. One seam has been traced to within 2000 yards of Victoria Harbour, and it may come closer. To sum up, the coal field is of the length and breadth of the island, and there are five workable seams, with an aggregate thickness of 27 feet. Mr. Lumsden estimates the length of this thickness of coal at 2 miles, which leaves more than the usual allowance for wants, faults, and waste. From 1850 to 1867 the coal raised was 80,642 tons, and the cost of raising was more than 2*l.* per ton, whilst the average net receipts did not exceed 1*l.* per ton. This the governor attributes to the failure of the Coolie immigration. The Government has now sanctioned the introduction of convicts from the Straits Settlement, and the pay-sheets for June showed a clear balance of profit—the first obtained for 20 years. The coal is reported to be good for steaming purposes, and about 25 per cent. inferior to Welsh; it burns quickly, gives great heat, forms much clinker and soot, and leaves little ash. Capt. Reed considers it to be equal or superior to many descriptions of coal sent into the markets, where it will obtain a good character if the people at the mines faithfully supply it in good and proper order. The engineers of H.M.S. Dwarf thinks the only objection to Labuan coal is that it is 15 per cent. lighter than the average of Welsh coal, mixture with which would make it fit for the service. Reports from 30 of H.M.'s ships, coming down to 1865, vary in the opinions expressed, some declaring the coal fit, others unfit, for the services, and favourable reports differ slightly as to the best proportions, with which Welsh and Labuan may be mixed.

WILL STEAM IGNITE COMBUSTIBLE SUBSTANCES?—This curious question is discussed in a recent number of the *Scientific American*. It is urged that as the heat generated by a hydrocarbon in combination with a combustible fibre will produce combustion, and as a fibrous material saturated with oil will, if exposed to the sun's rays, burst into flame, it follows that a greater degree of heat, whether produced by steam or any other agency, may produce like results. After mentioning the inflammable condition acquired by wood through which a steam-pipe has been passed, it is remarked that every engineer of lengthy experience and close observation knows that it is possible to ignite combustible or inflammable substances by the direct impact of steam. Cases have been recorded where dry wood was ignited by escaping steam, and, as an experiment, oil-saturated cotton waste and dry pine wood have been lighted by the steam from a boiler at a distance of 12 feet, the boiler pressure at the time being only 95 lbs., and the temperature 335°. The material burst into flame in a few minutes.

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The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 19, 1869.

COPPER.	£ s. d.	£ s. d.
Best selected..p. ton	82 0 0-	84 0 0
Tough cake and tile	80 0 0-	82 0 0
Sheathing & sheets.	83 0 0-	84 0 0
Bolts	83 0 0-	—
Bottoms	85 0 0-	88 0 0
Old (Exchange)	69 0 0-	70 0 0
Burra Burra	83 0 0-	—
Wire.....per lb.	0 1 0	- 0 1 0⅛
Tubes	0 0 11½	- 1 0

BRASS.	Per lb.
Sheets .....per lb.	9d.- —
Wire ..... „	8¼d.-8¼d.
Tubes..... „	10¼d.-11¼d.
Yellow Metal Sheath.p. lb.	7¼d.- —
Sheets ..... „	7d.- —

SPELTER.	Per ton.
Foreign on the spot	£22 0 0- —
„ to arrive..	22 0 0- —

ZINC.	
In sheets	£27 0 0- —

TIN.	
English blocks	116 0 0
Do., bars (in barrels)	117 0 0
Do., refined.....	120 0 0
Banca	116 0 0
Straits	116 0 0

TIN-PLATES.*	Per box.
IC Charcoal, 1st qua.	1 6 6- 1 8 6
IX Ditto, 1st quality	1 12 6- 1 14 6
IC Ditto, 2d quality..	1 5 6- 1 6 6
IX Ditto, 2d quality..	1 11 6- 1 12 6
IC Coke.....	1 3 6- 1 5 6
IX Ditto	1 9 6- 1 11 6
Canada plates, p. ton..	13 10 0- —
Ditto, at works	12 10 0- —

IRON.	Per ton.
Bars Welsh, in London	6 12 6- 6 15 6
Ditto, to arrive	6 10 0- 6 12 0
Nail rods	7 0 0- 7 2 6
„ Staffd. in London	7 12 6- 8 10 0
Bars ditto	7 10 0- 9 10 0
Hoops ditto	8 2 6- 9 15 0
Sheets, single.....	9 2 6-11 0 0
Pig No. 1, in Wales ..	3 15 0- 4 5 0
Refined metal, ditto..	4 0 0- 5 0 0
Bars, common ditto..	6 0 0- —
Do. mrch. Tyne or Tees	6 10 0- —
Do., railway, in Wales	6 0 0- —
Do., Swed. in London.	10 0 0-10 5 0
To arrive	10 5 0- —
Pig, No. 1, in Clyde ..	2 15 9- 3 2 6
Do. f.o.b. Tyne or Tees	2 9 6- —
Do. Nos. 3, 4, f.o.b. do.	2 6 6- 2 7 0
Railway chairs	5 10 0- 5 15 0
„ spikes	11 0 0-12 0 0
Indian Charcoal Pigs, in London, p. ton..	7 0 0- 7 10 0

STEEL.	Per ton.
Swed., in kegs (rolled)..	— - —
„ (hammered)..	15 5 0-15 10 0
Ditto, in faggots	16 0 0- —
English, spring	17 0 0-23 0 0
QUICKSILVER (p. bottle)	6 17 0- —

LEAD.	Per ton.
English Pig, com.....	19 2 6- —
Ditto, LB.....	19 7 6- —
Ditto, WB	21 0 0- —
Ditto, sheet.....	20 5 0- —
Ditto, red lead	21 0 0- —
Ditto, white	27 0 0-30 0 0
Ditto, patent shot....	22 0 0-22 10 6
Spanish.....	18 5 0-18 7 0

* At the works, 1s. to 1s. 6d. per box less.

REMARKS.—The Metal Market has not materially altered its position during the past week; a fair amount of business is still doing, and the prospect remains very favourable for an extended trade during the spring. Some metals especially are kept in considerable liveliness by speculative operations, which are more abundant than they have been for a long time past, and consequently prices are well maintained, and, in these cases, evince a tendency still to move upward; and although the market is not likely to be supported merely by these transactions, yet they tend to sustain it until an active demand springs up, which may be expected will be the case before very long. It is very satisfactory to see that the metal trade is so far recovering from its late depression, and is assuming an appearance of activity such as it used to have in former days; and we may fully anticipate that, should nothing unforeseen arise to retard it, we shall very soon see a degree of vigour developing itself in the market, such as has not been experienced since the check given to it during the great monetary crisis. It was thought not improbable that some advance might have been made in the Bank rate of discount this week; however, no change has been made, and it still remains at 3 per cent.; nevertheless, we may expect that as the demand for money becomes greater a rise in the Bank minimum will occur, perhaps at no distant day. The paragraph in the Queen's Speech at the opening of Parliament, that our relations with foreign nations continue upon a peaceful and satisfactory basis, is a source of satisfaction, and it is to be hoped that nothing will arise to disturb the present peaceful aspect of affairs, and that whatever matters of dispute may arise may be settled without having recourse to that which always proves injurious to all parties concerned—war.

COPPER.—Advices having been received from Chili confirming the previous report of charters for 2900 tons for this country, the market has become rather weaker, and Chili bars have been sold at a decline, 73*l.* to 73*l.* 10s. being the present quotation. English has also become rather easier in price, and the demand is less active. Burra is obtainable at 83*l.*, and Wallaroo is held for 85*l.*

IRON.—In Staffordshire there are a few orders coming in from the Continent and the United States. Some of the ports usually closed at this season of the year are now open, which somewhat assists the demand; but the trade continues quiet, and a considerable number of the works are not going more than half time. There has been a great want of orders for plates for some time past, and there is no improvement in that respect. The demand for sheets is also quiet, while there are fair orders for bars and hoops. In Welsh makers are proceeding but slowly in clearing the quantity of rails now lying at the docks, waiting shipment to the United States, South America, British America, and Peru. They have this week received additional orders from the United States, which, with the contracts lately entered into, will cause more activity to be witnessed at the rail mills as the spring season advances. A Russian contract is about to be given out for 30,000 tons, and hopes are entertained that the same will be added to those already secured from that country. There is no alteration in late quotations, which are firmly adhered to by makers, who evince no anxiety to enter into large contracts for forward delivery at present rates, as it is generally believed prices will shortly advance. In Swedish iron the demand continues good, and considerable business is still doing. The stock here is very small. In Scotch pig-iron the market has become weaker during the week, and prices have declined, the last price received from Glasgow being 54s. 11d. cash.

LEAD.—The market has become decidedly firmer, a better enquiry exists, and prices have an upward tendency.

TIN.—Straits has continued to improve, and a considerable amount of business has been done. Transactions to some extent have been done to arrive at 114*l.* 10s. to 115*l.*, and on the spot at the same price. It is now, however, held for 116*l.*, with every prospect of prices still going higher. Banca has been sold at 114*l.* 10s. cash, but it is now quoted 116*l.*

SPELTER.—The market remains very firm, and a large amount of business has been done at 21*l.* 10s. on the spot, but it is now held for 22*l.*, under which it cannot be brought, and there seems every probability of still higher prices.

TIN-PLATES.—The demand continues active, and makers are firm at the quotations.

STEEL.—A better business is doing in foreign.

QUICKSILVER.—Not much doing at present.

THE COPPER TRADE.—Messrs. Turnbull and Watson (Liverpool, Feb. 15)—The chief feature of the fortnight is the purchase by the trade of upwards of 2000 tons in fine copper, consisting of Cobre, Newfoundland, and Moonta ore and Chilian regulus, at 14s. 10½d. to 15s. per unit. There has also been a considerable demand for bars, and about 1500 tons have changed hands at 73*l.* 10s. to 74*l.* 5s. To arrive and for forward delivery 945 tons bars at 74*l.* 5s. to 75*l.* 10s. 360 tons Lota and Urmeneta ingots sold at 77*l.*, and 110 tons Urmeneta 78*l.* 10s. In Chilian regulus, to arrive, 1500 tons sold at 15s. per unit. On Feb. 8 the charters were advised by telegraph, *via* New York, for the second fortnight of Dec., as equal to 3000 tons fine, which temporarily checked business, and brought out a few second-hand parcels, but the market closes steadily at 73*l.* 10s. to 74*l.*

The sales since our last have been, on the spot here:—1330 tons bars, various brands, 74*l.* per ton; 100 tons bars, J. Edwards, 74*l.* 5s.; 360 tons ingots, Lota and Urmeneta, 77*l.*; 110 tons ingots, Urmeneta, 78*l.* 10s.; 150 tons bars, 73*l.* 10s. to 73*l.* 15s. On spot, at Swansea:—2190 tons regulus, Chilian, 15s. per unit; 320 tons ore, Chilian, 15s.; 1300 tons ore, Moonta, 15s.; 600 tons ore, Cobre, 14s. 10½d.; 1800 tons ore, Newfoundland, 14s. 10½d. per unit. To arrive here:—600 tons bars, part for forward delivery, 74*l.* 10s. to 75*l.* per ton; 50 tons bars, 74*l.* 5s.; 95 tons bars, 75*l.* 10s.; 200 tons bars, private terms. To arrive at Swansea, 1145 tons regulus, 15s. per unit; 600 tons regulus, private terms.

Arrivals from the West Coast, South America, during the past fortnight:—Here: Ianthe, from Lota, 454 tons bars, 145 tons ingots; Explorer, from Valparaiso, 46 tons bars; Acapulco, from Guayacan, 634 tons bars, 277 tons ingots. At Swansea:—Robert Bright, from Carrizal, 350 tons regulus; Corinna, from Coquimbo, 200 tons bars, 560 tons regulus.

Stocks of copper produce (Chilian and Bolivian)—

	Ores.	Regulus.	Bars.	Ingots.	Barilla.
Liverpool	1130	670	6500	475	103
Swansea	2320	3089	1140	—	214
Total	3450	3759	7640	475	317

Messrs. Vivian, Younger, and Bond—Telegraphic news, *via* America, having been received that the charters effected on the West Coast during the first half of the month of January amounted to 3000 tons of fine copper—2000 tons of bars, and 1000 tons of fine in ores and regulus—the market became quiet, and a few small lots out of second-hands have been offered at low prices, but the extent of business has been quite insignificant. The large holders are not disposed to meet such prices, whilst buyers of large quantities defer operations till the market shapes itself more clearly. Meantime it may be remarked that the recent heavy charters are very far forward, and a large proportion of the produce was not smelted, so that many of the vessels would not leave till March or April. This consideration has a certain influence here, as indicating the probability of light charters by approaching advices. The market closes with a rather firmer tone than was exhibited on the arrival of the above news.

Messrs. James and Shakspeare—The Chili mail has arrived with details of the charters for the last fortnight of 1868; the exact quantities were—Europe 3298 tons pure metal, of which 1060 tons in bars and ingots, 1495 tons in regulus, 439 tons in ore for England, and 304 tons bars for Havre, whilst about 300 tons copper in ore were chartered for the United States. On the 15th inst. telegrams came to hand advising the charters for the first half of January as equal to about 2900 tons pure, of which about 2000 tons in bars and ingots, the remainder in ore and regulus. These two heavy mails coming close together have flattened the market, and some speculative holders trying to realise bars and ingots have receded a further 10s. to 20s. per ton, showing a reduction of about 2*l.* from the highest price paid for cash parcels, a fall which importers, however, do not seem much disposed to concede. In France the quotations have given way about equal to 3*l.* per ton from the highest, and the quotations now ruling on that side will not permit of exports from England. The sales of the week have been quite insignificant, but the estimated stocks of Chili produce show a reduction of about 3500 tons pure metal during the first half of February; we refrain from giving the figures, as in Liverpool, Swansea, and Havre, where the imports from that quarter are landed, no returns are issued by the various docks and wharves, and the totals are, therefore, only computed, and not arrived at from any precise data: in London the exact quantities of copper lying in warehouse are known, and the figures can be relied on, but without precise information of what exists in the other ports, such information alone is useless. In Australian sales of about 100 tons Wallaroo were reported from 85*l.* down to 84*l.*, but some moderate lots of Burra then offering at 83*l.* without finding purchasers, have since sold at 81*l.* 10s., immediate cash. Not much doing in English; there is a moderate enquiry for export to the East, chiefly to the Calcutta market.—TIN: Some large sales of Banca and Straits have recently been made at 114s. to 116s. per cwt., according to prompt, and the speculation seems reviving, owing to reports that the production of the former has fallen off during 1868 about one-third as compared with previous years. Prices generally are about 1s. to 1s. 6d. higher than this day last week.

The MINING SHARE MARKET has been pretty active again this week, but the amount of general business has not been quite so extensive. Foreign tin has advanced, and the standard for copper ore up 7s. per ton. The mines chiefly dealt in have been East Grenville, Grenville, West Drake Walls, West Frances, Providence Mines, Great Laxey, Great North Laxey, Herodsfoot, New Lovell, Basset, Seton, West Seton, West Chiverton, Wheal Chiverton, South Condurrow, East Caradon, Great Retallack, Great Wheal Vor, Chontales, Frank Mills, Don Pedro North del Rey, and a few others.

Prince of Wales, 22s. to 24s.; at the meeting, yesterday, the accounts showed a profit on the quarter of 298*l.* 16s. 3d., and a balance of assets over liabilities of 1612*l.* 11s. 10d. The report states that the 65 has been driven east 21 fms. from cross-cut; the lode in the present end is worth 20*l.* per fm., and very promising. The 65 west is worth 5*l.* per fm. No ore ground has yet been stoped between the 55 and 65, and the next sampling is estimated at 100 tons of better quality ore. Chiverton Moor, 4¼ to 4⅜; Cook's Kitchen, 12½ to 13½; Drake Walls, 16s. to 18s.; East Basset, 5 to 7; East Caradon, 8⅜ to 9; East Lovell, 8 to 8½; Frank Mills, 3½ to 4; Frontino and Bolivia, 8s. to 10s.; Great Laxey, 18¼ to 19½; Great Retallack, 2¼ to 2⅜. East Grenville, 3¾ to 4; at the meeting, held on Thursday, the accounts showed a balance of liabilities over assets of 485*l.* 1s. 11d., and a call of 1s. 6d. per share was made. The report shows a great improvement, especially in the 55, which has been driven east 22½ fms., 20 fms. of which was through a productive lode, averaging 10*l.* 10s. per fathom. The lode in the end is now worth 3 tons of copper ore per fathom. A rise behind this end is worth from 2½ to 3 tons per fathom. The copper returns will be considerably increased, and the mine bids fair to become now a valuable paying property. Great Wheal Vor, 12 to 12½; Herodsfoot, 44 to 46; Marke Valley, 9 to 9¼; New Lovell, 2⅜ to 2⅝; New Seton, 70 to 75; North Crofty, 23s. to 25s.; North Treskerby, 18s. to 20s.; Providence Mines, 35 to 37; South Caradon, 360 to 380; South Condurrow, 22s. to 24s.; South Frances, 15 to 17½; St. Ives Consols, 12 to 13; Stray Park, 5 to 6; Tincroft, 17 to 17½.

Great North Laxey shares have not been quite so firm, and leave off 30s. to 35s. The 110 north is 2 ft. wide, yielding stones of lead and blende. The 96 fm. level end 5 cwts. The stopes in the roof of the 96 is worth 1½ ton per fathom. The 84 fm. level north is the best end in the mine, and has greatly improved in its general character and in bearing appearance, worth over 1 ton of lead per fm. The stopes in the back of the 60 south have improved to 2 tons of lead per fathom. The 27 fm. level end, ½ ton. West Caradon, 2½ to 3; West Chiverton, 54 to 55, firmer, and more dealt in. West Drake Walls have advanced to 7s. 6d., 10s., and a good demand. Gonamena, 20s. to 25s.; at the meeting the accounts showed a balance in hand of 22*l.* 7s. 11d., and a call of 1s. 6d. per share was made. The prospects of the mine have much improved in the bottom levels, and the shaft is to be sunk deeper at once. Venning's lode, in the 138, has gone through 5 fathoms of ore, worth 5 tons per fathom; end worth 3 tons. In the back of this level there is also a stope worth 4 to 5 tons per fathom. West Frances shares have been in good request, at 43 to 45; Wheal Agar, 1 to 1¼. Don Pedro shares have advanced to 4¼, 4½; the produce for December has been telegraphed as 21,499 oitavas. Wheal Basset, 69 to 71; Wheal Chiverton, 2½ to 2⅝. Wheal Grenville, 44s. to 46s., and largely dealt in; several droppers containing good tin have been met with in driving the 90 cross-cut north towards the South Condurrow lode. Wheal Kitty (St. Agnes), 4 to 4½; Wheal Mary Ann, 21 to 22; Wheal Seton, 70 to 75; Wheal Trelawny, 8 to 9; Wheal Uny, 3⅜ to 3⅝. Chontales shares have advanced to 25s., 30s.; we understand a high proportion of the debentures have been subscribed for; and as from the best reports we are able to obtain there is nothing required but further capital to make the mines very profitable, the directors are naturally anxious for those shareholders who have not yet subscribed to come forward and take their proportion as early as possible. Wheal Seton, 190 to 200; at the meeting, held on Tuesday, the accounts showed a profit of 2404*l.* 12s. 8d. on the two months' working, and a dividend of 6*l.* per share (2400*l.*) was declared, leaving 1327*l.* 0s. 9d. in hand. The copper ores sold, and to come to credit of the next account, realised 5855*l.* 19s. 2d. The mine continues to look well.

The Market for Mine Shares on the Stock Exchange during the week has been very quiet, but the tendency of prices in foreign descriptions has been towards improvement. Don Pedro shares, influenced by the favourable return, have had a good rise. Del Rey shares have also risen, and are firm at quotations; and Taquaril shares have been largely dealt in. St. John del Rey, 18½ to 19½; Don Pedro, 3¾ to 3⅞ prem.; Anglo-Brazilian, ⅛ dis. to par; Pestarena, 1⅜ to 1⅝ dis.; Chontales, 1½ to 1⅝; Rossa Grande, 9-16 to 11-16 prem.; Anglo-Italian, ⅛ to ¼ prem.; United Mexican, 1⅜ to 2; Frontino and Bolivia, ⅜ to ½; Port Phillip, 1⅞ to 2; General Brazilian, 2s. 6d. to 3s. 6d. prem.; Capula Silver, 1½ to 1⅝; Anglo-Argentine, par to ¼ prem.; Sao Vicente, ⅜ to ½; Taquaril Gold, 4s. 6d. to 5s. 6d. prem.; Yudanamutana, 1⅞ to 2⅛; Nerbudda Coal and Iron, 3½ to 2⅝ dis. British Mines have commanded a fair share of attention. Great Vor, Great Laxey, West Chiverton, and Glan Alun shares are noticeably firmer, and in good demand. East Caradon and Marke Valley shares are also in demand. Great Laxey, 19 to 19½; Great Wheal Vor, 12 to 12½; West Chiverton, 54½ to 54⅝; Chiverton, 2⅜ to 2⅝; East Caradon, 3⅜ to 9; Marke Valley, 8⅞ to 9½; Prince of Wales, 23s. to 24s.; Glan Alun, 12s. 6d. to 13s. 6d.

IRISH MINE SHARE MARKET.—Mining shares have been dealt in frequently, but ending with a downward tendency. Mining Company of Ireland shares, which closed last week at 11*l.* 17s. 6d., have gradually gone back to 11*l.* 7s. 6d. (7*l.* paid), and leave off not much in demand. Wicklow Copper shares (2*l.* 10s. paid) opened on Monday at 11*l.* 10s., but also close at 11*l.* 7s. 8d., rather weak. Killaloe Slate Quarry shares improved from 17s. to 17s. 3d. (1*l.* paid). Cape Copper shares, which dropped 2s. 6d. from previous quotations, remain without change or animation at 13*l.* 17s. 6d., including the dividend; they will henceforth be dealt in *ex* of dividend. Arklow Chemical Works shares continue in much favour, at 1*l.* 9s. (1*l.* paid.) The general share market was much disturbed by the strong and sudden decline of the National Bank shares (of 50*l.*, 30*l.* paid), which last week brought 44*l.* 10s. to 44*l.* 5s., but since the intelligence of the defeat in the matter of Lafitte and Co. (Limited) went down smartly, the lowest point just reached being 40*l.* 2s. 6d., leaving off, however, with 2s. 6d. to 5s. per share improvement.

At Truro Ticketing, on Thursday, 3102 tons of ore were sold, realising 11,339*l.* 19s. 0d. The particulars of the sale were:—Average

standard, 113*l.* 2s.; average produce, 5⅛; average price per ton, 3*l.* 13s. 0d.; quantity of fine copper, 175 tons 14 cwts. The following are the particulars of the sales during the past month:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Jan. 21 ..	3322	£108 13 0	6⅝	£4 10 0	13s. 4d.	£67 8 6
„ 28 ..	2341	103 9 0	7⅜	5 3 0	13 6	67 8 0
Feb. 4 ..	2432	107 11 0	6⅜	4 3 6	12 11	64 14 0
„ 11 ..	1529	106 4 0	6½	4 2 0	12 9	63 14 0
„ 18 ..	3102	113 2 0	5⅝	3 13 0	12 10	64 11 0

Compared with last week's sale, the advance has been in the standard 7s., and in the price per ton of ore about 5d. Compared with the corresponding sale of last month, the advance has been in the standard 1*l.* 10s., and in the price per ton of ore about 1s. 6d.

At Botallack Mine meeting, on Wednesday, the accounts showed a profit on the three months' working of 2223*l.*, which with 391*l.* brought forward left 2615*l.* in favour of the mine. A dividend of 2000*l.* (10*l.* per share) was declared, leaving 615*l.* in hand. The prospects of the mine are reported to be very promising both for tin and copper.

At the West Wheal Seton meeting, on Tuesday, the accounts showed a credit balance of 3727*l.* 0s. 9d., the profit realised during November and December having amounted to 2404*l.* 12s. 8d. A dividend of 2400*l.* (6*l.* per share) was declared, leaving 1327*l.* 0s. 9d. to be carried forward to the credit of the next account. The amount of copper ores, sold Dec. 31 and Feb. 4, to come to the credit of the next account is 5855*l.* 19s. 2d., and some tin.

At the North Wheal Chiverton Silver Lead Mine meeting, to be held on Thursday, the accounts show a credit balance of 553*l.* 6s. 9d. The ground sunk and driven through during the three months ending December was 46 fathoms 3 feet. The average cost of driving the levels for the three months was 3*l.* 2s. per fathom; and the average earnings of tutwork men, 3*l.* 7s. 1d. per month.

At Gonamena Mine general meeting, on Feb. 10, the accounts showed a credit balance of 22*l.* 7s. 11d. (taking credit for calls in arrear and disputed, amounting to 489*l.* 0s. 5d.) A call of 1s. 6d. per share was made. The agent reported that, as the prospects in the bottom level are so encouraging, it was advisable to sink the shaft with all speed, and, in order to do so, the men had been set to fix the plunger-lift in the 138, to sink 10 fms., cut ground, case and divide the shaft, &c., for 240*l.* The copper ore for sale on Thursday last amounted to 81 tons.

At West Tremayne Mine meeting, on Wednesday (Mr. Sutton in the chair), the accounts showed a cash balance of 4*l.* 15s. 8d., and liabilities in excess of assets 159*l.* 3s. 8d. A call of 2s. per share was made. The report presented, which was of an encouraging nature, recommended a vigorous prosecution of the engine lode in depth, and more extended operations on the south lode, which at the 20 presents such congenial and highly promising indications as to justify the expectation of finding at deeper points productive and rich ore. The agent expressed undiminished confidence in the ultimate success of the undertaking.

At Wheal Buller meeting, on Thursday (Mr. Henry Milford in the chair), the accounts showed a debit balance of 723*l.* 16s. 11d. A call of 25s. per share was made. Details in another column.

At Caldbeck Fells Consolidated Lead and Copper Mine meeting, on Wednesday (Sir Robert Briscoe in the chair), it was unanimously agreed to sink the shafts and explore the mine in depth. A call of 2s. 6d. per share was made. Details in another column.

At the Prince of Wales Mine meeting, yesterday (Mr. J. Y. Watson, F.G.S., in the chair), the accounts for the three months, ending with the costs for December, showed a profit of 298*l.* 16s. 6d. The assets over liabilities amounted to 1664*l.* The report stated that since the last general meeting Watson's shaft has been sunk 6 ft. below the 65, and a 30 fm. 7-in. plunger-lift has been fixed in the new shaft, and a line of rods attached to the crusher-wheel, which is working well, and greatly assists the steam-power. The 65 east has been driven 8 fms. 3 ft., being now 30 fms. 4 ft. from cross-cut; the lode in the present end is 2½ ft. wide, worth fully 20*l.* per fathom—a very promising end. The 65 fm. level end west is 3 ft. wide, worth 5*l.* per fathom. A rise has been put up in the back of this level, and communicated with the 55, which has laid open a good run of ore ground for stoping; as yet no ground has been stoped below the 55 fm. level. After referring to the other points of operation, the report concluded by stating that it was hoped the sampling at the end of this month would be about 100 tons of better quality copper ore than the last. During the discussion upon the motion for the reception of the report and accounts it was stated by the Chairman that the true interests of the mine would best be served by not declaring a dividend upon the present occasion, but by carrying forward the profit to the credit of the next account. Every expense was kept down to the lowest limits compatible with the efficient working of the mine. The report and accounts were received and allowed, and it was unanimously resolved that the profit realised during the quarter be added to the balance in hand. A vote of thanks to the Chairman concluded the proceedings.

At North Downs Mine (adjourned) meeting, on Tuesday (Mr. Henry Milford in the chair), it was stated that at the meeting (of which the present was an adjournment) it was intimated that a shareholder who held one-half of the mine was in negociation with some influential parties in Cornwall for the working of the Peever sett. He had now to state that although no positive agreement had been made to the effect, yet that a moral promise had been given that the whole of the shares would be taken up in Cornwall. But after taking every circumstance into consideration, the committee thought that the best policy to pursue was to pass a resolution to issue the 2968 forfeited shares, and to offer them *pro rata* to the shareholders at (say) 11s. per share. He added that the shareholder to whom he had referred as holding one-half of the mine was ready to take his proportion of those shares, and if any of the other shareholders decline to accept their proportions that they would be taken up by parties in Cornwall. Mr. Ward, the secretary, explained that the amount due on those forfeited shares was 985*l.*, and the balance against the mine up to the end of December was 661*l.*, making a total of 1646*l.* Taking those shares as issued at 11s. per share, the amount realised would be 1632*l.*, leaving a balance of 14*l.* against the mine. After some discussion, it was agreed, upon the proposition of Mr. M'Callan, seconded by Mr. Malin, that the forfeited shares be offered *pro rata* to the shareholders at 11s. per share, and that 5s. 6d. per share be paid within 14 days, and the remaining 5s. 6d. when the committee shall deem expedient. It was further agreed that a special meeting should be held that day three weeks, when the committee would submit the result. A vote of thanks to the Chairman terminated the proceedings.

At the Vigra and Clogau Mine meeting, to be held on Tuesday, the report of the directors to be submitted states that the shareholders would have been called together in June had the directors then been in possession of evidence of a sufficiently positive character to enable the proprietors to determine upon the continuance or abandonment of the enterprise. The discoveries made in the eastern part of the No. 2 mine since September, in the judgment of the directors, will warrant the continuance of the workings there for some time longer if funds can be supplied for the purpose; but, looking to the liabilities of the company, a call to the full amount of the unpaid capital will barely cover the same, and, from pressing claims, becomes immediately imperative. The working expenses have been for some time much reduced, and the search for gold is now entirely confined to the eastern ground. Latterly the yield of gold has paid about half the monthly costs. The report of the engineer (Mr. Arthur Dean) is to the effect that the formation of the rock does not enable him to offer a decided opinion as to the time required to test the eastern ground, where he is anticipating rich deposits; but, at the meeting, his further explanations will help the shareholders to decide as to the future course to be adopted. It is due to Mr. Dean to say that the discoveries west in Nos. 4 and 5 shafts and in the new eastern section were for several months accurately predicted. The returns of gold between Oct. 1, 1867, and Dec. 31, 1868, has been 490 ozs. 12 dwts. 2 grs.

At the Penrhyn Granite Quarries Company (Limited) extraordinary general meeting, on Feb. 3, Mr. John James Harris (Addis and Harris), 25, Old Jewry, was appointed liquidator, and such appointment was confirmed by Vice-Chancelor Sir R. Malins on the 11th inst., on the matter being carried under the supervision of the Court.

The Bank of England return for the week ending on Wednesday evening showed in the ISSUE DEPARTMENT an increase in the "notes issued" of 66,665*l.*, which is represented by a corresponding increase in the "coin and bullion" on the other side of the account. In the BANKING DEPARTMENT there is shown a increase in the "other deposits" of 455,938*l.*; and in the "seven day and other bills" of 4844*l.*; and in the "rest" of 19,644*l.*: together, 480,426*l.*; and a decrease in the "public deposits" of 67,730*l.*=412,696*l.* On the other side of the account there is an increase in the "Government securities" of 50,000*l.*, and in the "other securities" of 121,536*l.*=171,536*l.*, leaving an increase in the total reserve of 241,160*l.*

The amount of gold in the course of transmission from Australia to England is 525,000*l.*, in addition to 40,000*l.* from New Zealand. Annexed are the particulars:—Empress of India, 20,500*l.*; Norfolk, 57,500*l.*; Clanronald, 48,000*l.*; British Statesman, 12,000*l.*; Britomart, 10,000*l.*; Thyatira, 41,000*l.*; Dover Castle, 30,000*l.*; Martha Birnie, 41,500*l.*; Ballarat, 40,000*l.*; Marpesia, 22,500*l.*; Dudley Castle, 42,000*l.*; Red Jacket, 41,000*l.*; Mediator, 14,000*l.*; Rockliff, 20,000*l.*; Suffolk, 81,000*l.*; and Conflict, 94,000*l.*

Mr. James Freeling Wilkinson has recommenced business at St. Clement's House, Lombard-street—an announcement which will be gratifying to a large number of friends.

The NORTH STAR GOLD MINING COMPANY, to the formation of which reference has already been made in the Journal, has given notice that the list of applications for shares will be closed on Tuesday next.

The shares of the Ironmaster's Company (Limited)—an undertaking which it is considered will occupy a prominent position in connection with the iron trade—are quoted at 12*l.* 10s. to 15*l.* per share, with 10*l.* paid-up.

COAL MARKET.—The long-expected fleet arrived this week, in all 251 ships. The prices of household coals were reduced about 1s. per ton, which led to a large business, and nearly a clearance was effected, the market to-day showing some revival, and slightly better prices. Hartley coals have been depressed, and sold at very unremunerative prices. Haswell Wallsend, 16s.; South Hetton Wallsend, 16s.; Buddle's West Hartley, 12s. 9d.; Hartlepool Wallsend, 16s.; Tees Wallsend, 15s. 3d.; Eden Main, 14s.; Harton Wallsend, 13s. 3d.; Hawthorn Wallsend, 13s. 3d., Tunstall Wallsend, 13s. 3d.—Unsold, 6 cargoes: 25 ships at sea.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, Liverpool, we learn that the quantity of coal exported in January was 611,818 tons, against 594,451 tons in the corresponding month of 1868, showing an increase of 17,367 tons. The particulars are—From the Northern Ports, 254,435 tons; Yorkshire, 29,974 tons; London, 5396 tons; Liverpool, 37,768 tons; Severn Ports, 251,618 tons; and Scotch Ports, 32,627 tons. The increase was—From Northern Ports, 22,595 tons; Yorkshire, 1288 tons; London, 2380 tons; Severn Ports, 5859 tons. The decrease was—Liverpool, 8825 tons; Scotch Ports, 5930 tons.

THE DOLWEN COMPANY (Limited).—We are informed that the demand for prospectuses has been very numerous, and that an early day will be fixed upon for closing the list of applications for shares.

MINING IN PRUSSIA.—The statistics relating to mining in Prussia show the surprising progress made by that country during the last 20 years in this industry, by the introduction of improved systems of extraction by the use of steam-power. In 1837 there were 1587 mines worked in Prussia, giving employment to 33,161 miners. In 1867 this number had increased to 2162, with 48,351 miners. The total value of the mineral production, which in 1837 was 833,932*l.*, in 1867 amounted to upwards of 8,565,000*l.*

THE CORNISH MINE SHARE MARKET.—Business in the Cornish Mine Share Market during the past week compares most favourably with the period reported on in our last impression, and there has been apparently a more ready disposition on the part of the public to turn their attention to good mining stock, both for speculation and investment, consequently imparting to the market a healthier tone, and slightly enhanced prices for stock generally. The effect of the recent advance in tin is now shown by the increased dividends paid by many of our mines; and others have already entered the Dividend List, or about to do so; which were working at a loss about 12 or 18 months ago, and in some instances making calls. It is satisfactory to note the general anticipation is that as the spring advances, and trade expands with foreign countries, a greater demand will, in all probability, arise for all descriptions of metals, in which it is hoped that copper will largely participate. If no unforeseen circumstances occur, we may again look forward to some of our copper mines resuming their old prominent standing in the Share Market.—*West Briton.*

A petition for the compulsory winding-up of Shackleford, Ford, and Co. (Limited) has been filed, and will be heard next week before the Master of the Rolls, when the history of the company and the position of its affairs will be fully disclosed. The petitioner is a clergyman.

TO CAPITALISTS, COMPANIES, ETC.

A MINING ENGINEER, of LARGE EXPERIENCE, both in the COLLIERIES and MINE WORKS of SOUTH WALES, and in IRON MINES ABROAD, and now residing and holding an important mineral agency in Wales, has a part of his time unoccupied, and is OPEN TO MAKE ARRANGEMENTS with any GENTLEMEN or COMPANY who may wish to employ him in the INSPECTION or SUPERINTENDENCE of MINING WORKS or PROPERTIES.

He is thoroughly acquainted with sound practical COAL and IRON MINING, and their corelative branches, and can produce the highest references as to respectability and competency. Reports, surveys, and valuations made, and railways, inclines, &c., planned and superintended.

Address—"Alpha, Ff. T." Pontypridd, Glamorganshire.

TWO PRACTICAL ENGINEERS, holding responsible positions in connection with the IRON and STEEL TRADE, ages 35 and 40 years respectively, and with 20 years' experience, have between them from £4000 to £5000 of capital. They REQUIRE a PARTNER with £10,000, to ENTER into a SPECIAL BRANCH in a SPECIAL DISTRICT of the IRON TRADE, wherein there are good and safe returns.

Principals only, or their solicitors, are requested to make application.

Address, "Vulcan," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

TO COAL AND IRONMASTERS.—A Gentleman, experienced in MANAGEMENT, desires an APPOINTMENT as CONFIDENTIAL GENERAL MANAGER of an extensive COLLIERY, IRONWORKS, MINES, &c., or the DEVELOPMENT of FRESH GROUND, where high class certificates of practical and business ability, &c., would be appreciatively remunerated. Could take a pecuniary interest if desired.

Address, "Veritas," G. Vickers, publisher, Angel-court, Strand.

PYRITES.—The Advertiser wishes to PURCHASE FOUR HUNDRED to FIVE HUNDRED TONS of PYRITES, to be delivered in lots of 50 to 100 tons weekly.

Apply, per letter, stating price for cash, to Box No. 2, Post Office, Birmingham.

BROAD-GUAGE WEIGHING MACHINE.—WANTED, TO PURCHASE, a secondhand WEIGHING MACHINE, capable of weighing 20 tons.

Apply to the CWMFELIN TIN-PLATE COMPANY, Swansea.

CONISTON COPPER MINES, NORTH LANCASHIRE.

WANTED, a GENERAL MANAGER for these Mines. A man with great experience in copper mines indispensable.

Apply, stating age and salary required, and with testimonials, to Mr. HARRY ARNOLD, of Kendal, Westmoreland, Solicitor.

WANTED, a good practical MINING ENGINEER, to take CHARGE and DEVELOPE some LEAD and CALAMINE MINES in SPAIN. He must speak Spanish.

Letters to be addressed to "T. T. J.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, for a COLLIERY in GLAMORGANSHIRE, a FIRST-CLASS SECOND HAND CORNISH BEAM ENGINE, complete; the cylinder to be not less than 80 inches in diameter. The engine to be delivered at either Cardiff or Newport.

Tenders, with detailed plans and particulars, to be forwarded to Messrs. DOBSON and BROWN, Cardiff, endorsed "Tender for Pumping Engine," not later than Saturday, the 27th day of February inst.

WANTED, for the ROMAN GRAVELS MINING COMPANY, MINSTERLEY, SALOP, a SECONDHAND BALANCE BEAM (cast iron), from 6 to 8 tons weight, and about 26 feet long.

WANTED, a secondhand HORIZONTAL HIGH-PRESSURE STEAM ENGINE, about 15 in. cylinder and 2 ft. 6 in. stroke, with winding gear attached. The whole must be in good working condition, delivered at Mostyn Station.

Prices, &c., to be sent to Capt. LEAN, Trelogan Mine, Holywell, on or before March 2, 1869.

MINING IN SPAIN.—A MINING AND METALLURGICAL ENGINEER, thoroughly versed in Spanish Mines, is on the eve of departure for that country, having been commissioned to REPORT on MINES in the NORTH and SOUTH of SPAIN.

Any person or companies desirous to employ him to report on their properties can address to "H. S.," 21A, Hanover-square.

CHINA-STONE QUARRY, in the ST. STEPHEN'S district, CORNWALL, FOR SALE.

Address, "D. L. C.," Post Office, Bodmin, Cornwall.

SAFE INVESTMENT.

CHINA-CLAY WORKS IN CORNWALL.—The proprietors of well laid out and advantageous works, in full operation, with an established and profitable market for the clay, are desirous of EFFECTING an IMMEDIATE SALE of the WHOLE, or a PORTION, upon very favourable terms.

Satisfactory reasons for selling, and full particulars given, on application to "China-Clay," Post Office, Plymouth.

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SEVERAL VALUABLE MINES FOR SALE,—LEAD, COPPER, BLENDE, and IRON. The Mining Laws of Prussia gives with the concession to work an absolute right of property in the mine for ever, subject only to a royalty of 2 per cent.

Apply to Mr. YOUNGHUSBAND, 6½, Wilhelm Strasse, Bonn-on-the-Rhine.

TO LET, A VALUABLE COAL MINE.—Apply to Mr. GEORGE DAVIDSON, Mawley, Cleobury Mortimer, Shropshire.—Dec. 12, 1868.

BRENKBURNE IRON AND COAL COMPANY (LIMITED).

IN LIQUIDATION.

THE LIQUIDATOR is prepared to RECEIVE, at the company's offices, Dawley, Wellington, Salop, TENDERS for the PURCHASE of the PLANT, LEASE, and GOODWILL of the above company.

The property may be viewed on application at the works, near Morpeth.

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LOCOMOTIVE, PUMPING, AND WINDING ENGINES

By leading builders, and at greatly reduced prices;

STEAM CRANES, BOILERS, CASTINGS, WAGONS (on sale or hire);

RAILS, CHAIRS, POINTS and CROSSINGS, SLEEPERS, WIRE and HEMP ROPES, and every description of RAILWAY and MINING PLANT (new and secondhand).

Particulars and quotations on application to—

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Contract for Best British Iron.

BY ORDER OF THE SECRETARY OF STATE FOR INDIA IN COUNCIL

NOTICE IS HEREBY GIVEN that the DIRECTOR-GENERAL OF STORES FOR INDIA, will be READY, on or before Monday, the 22d inst., to RECEIVE PROPOSALS in writing, sealed up, from such persons as may be willing to SUPPLY—

BEST BRITISH IRON.

And that the conditions of the said contract may be had on application, addressed to the Director-General of Stores, India Office, Westminster, S.W., where the proposals are to be left any time before Two o'clock P.M. of the said 22d day of February, 1869, after which hour no tender will be received.

India Office, Feb. 15, 1869. GERALD C. TALBOT, Director-General.

Game Licenses.

THE COMMISSIONERS OF INLAND REVENUE hereby give notice that SUPPLEMENTARY LISTS, containing the NAMES of all PERSONS who have taken out LICENSES to KILL and DEAL in GAME in the current year, from 30th September last inclusive, have been printed for each Excise Collection.

A Copy of the List, applicable to any district, may be obtained GRATIS on application at the offices of the respective Collectors or Supervisors of Inland Revenue, Distributors or Sub-Distributors of Stamps, by whom Licenses are issued.

The Commissioners further give notice that instructions have been issued to their officers to take the necessary steps to prefer informations for penalties against all persons found in pursuit of or dealing in game without license.

WM. CORBETT, Secretary.

Inland Revenue, Somerset House, London, Feb. 15, 1869.

STANNARIES LAW AMENDMENT.

AT a MEETING of the COMMITTEE on the STANNARIES LAW AMENDMENT, held at the Royal Hotel, Truro, on Tuesday, 9th February, 1869, present—

THOS. S. BOLITHO, Esq., Chairman.

Lord Falmouth, Sir W. Williams, Bart., Messrs. John St. Aubyn, M.P., Major Bickford, A. Williams, S. H. James, F. Hill, Marrack, Boyns, R. H. Pike, R. R. Michell, S. Higgs, Williams, Rogers, Haye, Vivian, Teague, Downing, and Cornish.

Letters were read from Messrs. Murchison, A. Pendarves Vivian, M.P., E. Brydges Willyams, M.P., S. Trehawke Kekewich, M.P., the Registrar of the Stannaries, Charles Fox, Sir R. R. Vyvyan, Bart., W. Polkinghorne, Charles Magniac, M.P., and Chr. Childs.

On Mr. Murchison's letter being read, the secretary was requested to explain to him that the present Bill was intended to apply to Cost-book mines only, and would in no way (except on the subject of wages in the cases of winding-up) affect companies registered under the Companies Act, 1862.

The Draft Bill was further considered and amended.

Resolved,—"That the Bill, as now amended, be placed in the hands of the draftsman for revision, and that it be afterwards printed."

The committee adjourned to Redruth on Monday, 22d instant, at 11 A.M., with a view to a general meeting at noon.

The committee suggest that the expenses should be met by a voluntary rate of 1-8th of a penny in the £ on all mines now assessable to the Stannaries rate, assisted by voluntary subscriptions of gentlemen wishing to forward the Amendment. THOS. S. BOLITHO, Chairman.

The thanks of the meeting were voted to the Chairman for his conduct in the chair. THOS. CORNISH, Secretary.

STANNARIES LAW AMENDMENT.

NOTICE IS HEREBY GIVEN, that a PUBLIC MEETING will be HELD at Tabb's Hotel, Redruth, on MONDAY, 22d instant, at noon, to receive and consider the report of the committee, and the Draft Bill prepared by them, and for the transaction of general business.

Full copies of the Draft Bill will be forwarded to the MINING JOURNAL, Plymouth daily, and the two county weekly papers in time for publication on Friday next, 19th instant; and copies can also be obtained on application to the undersigned. By Order, THOMAS CORNISH, Secretary.

Penzance, 15th February, 1869.

NEW RAILS FOR SALE.

120 TONS of FLANGE SECTION ..... 50 lbs. per yard.
160 TONS DITTO DITTO ..... 56 ditto
60 TONS of BRIDGE DITTO ..... 60 ditto
300 TONS of DOUBLE-HEADED DITTO ..... 70 to 75 lbs. per yard.

With CHAIRS, FISH-PLATES, POINTS and CROSSINGS, &c.

Also 250 TONS of OLD RAILS of FLANGE and BRIDGE SECTIONS, for cutting up.

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21, Gresham-street, Old Jewry. M. BEALE, Secretary.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Feb. 8—	Bronfloyd	60	£13 3 6	Weston & Collingborn
18—	Wheal Mary Ann	55	24 4 6	Stock and Co.
—	ditto	56	14 10 6	Treffry Estate.
—	Whitewell	12	12 6 6	Runcorn Smelting Co.
—	ditto	8	10 19 0	Peter Glover.

[In last week's Journal the price of the two parcels of lead ore sold by the Van Mines appeared as £12 8s. 6d. per ton. This is an error; it should have been £13 8s. 6d.]

BLACK TIN.

Date.	Mines.	Ts. c. q. lbs.	Price p. ton.	Amount.	Purchaser.
Feb. 12—	Mary Hutchins ..	5 2 1 14 ..	£70 0 0 ..	£358 6 3—	Bolitho.
13—	Pedn-an-drea	8 6 0 22 ..	— ..	556 11 0—	—

COPPER ORES.

Sampled Feb. 3, and sold at the Royal Hotel, Truro, Feb. 18.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Great Consols..	134	£2 13 6	Okel Tor	50	£5 2 0
ditto	119	4 18 0	ditto	49	2 18 6
ditto	118	5 1 0	East Caradon.....	80	4 17 6
ditto	117	4 18 0	ditto	71	3 14 6
ditto	112	4 16 0	ditto	46	1 19 6
ditto	99	4 19 0	Gawton	58	3 3 6
ditto	98	2 11 0	ditto	33	4 15 0
ditto	93	2 3 6	ditto	30	7 10 6
ditto	92	2 12 0	ditto	29	1 3 0
ditto	91	2 16 6	Kelly Bray	70	5 0 6
ditto	79	2 6 6	ditto	21	3 1 6
ditto	71	2 4 6	ditto	19	10 19 6
ditto	61	4 15 0	Prince of Wales.....	35	3 11 0
ditto	43	3 10 6	ditto	34	4 14 6
ditto	14	13 6 6	ditto	32	4 13 6
Marke Valley	89	2 4 0	Gonamena	65	5 17 6
ditto	85	2 4 6	ditto	16	2 2 0
ditto	81	4 16 0	Brookwood	48	2 10 6
ditto	80	7 8 0	ditto	32	1 14 6
ditto	51	1 7 0	Wheal Crebor.....	33	3 8 6
ditto	50	2 4 6	ditto	27	3 4 6
ditto	45	3 17 6	Wheal Russell	53	3 6 6
ditto	40	1 12 0	Wh. Mary Florence..	33	2 16 6
Okel Tor	80	1 5 6	Belstone	30	3 19 6
ditto	71	2 16 6	Wheal Kitty	15	5 15 6
ditto	70	1 9 6	Sortridge Consols....	10	3 6 6

TOTAL PRODUCE.

Devon Great Con..1341	.... £5056	7 6	Brookwood	80	£ 176 8 0
Marke Valley 521	 1784	4 0	Wheal Crebor....	60	200 2 0
Okel Tor 320	 804	3 0	Wheal Russell ..	53	178 4 6
East Caradon.... 197	 745	6 6	Wh. Mary Floren.	33	93 4 6
Gawton..... 150	 600	0 0	Belstone	30	119 5 0
Kelly Bray 110	 624	17 0	Wheal Kitty	15	86 12 6
Prince of Wales.. 101	 424	10 0	Sortridge Consols.	10	33 5 0
Gonamena 81	 415	9 6			

Average standard..... £113 2 0 | Average produce 5⅛
Average price per ton £3 13 0
Quantity of ore .....3102 tons | Quantity of fine copper..175 tons 14 cwts.
Amount of money £11,339 19 0
LAST SALE.—Average standard..... £106 4 0—Average produce..... 6⅛
Standard of corresponding sale last month, £108 13 0—Produce, 6⅝.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	609½	£1874 16 4
Freeman and Co.	269½	1024 9 3
Grenfell and Sons	322	1534 13 0
Sims, Williams, and Co.	371	1884 15 6
Williams, Foster, and Co.....	597¼	2407 13 9
Mason and Elkington.....	394 5-6....	1205 11 7
Bankart and Sons	411	1060 17 6
Copper Miners' Company	126 5-6....	347 2 1
Total	3102	£11,339 19 0

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday next—Mines and parcels.—South Caradon 518—Great North Downs 265—Clifford Amalgamated 236—Phœnix Mines 196—West Wheal Damsel 158—Craddock Moor 74—Pennance 40.—Total, 1487 tons.

Copper ores for sale at Tabb's Hotel, Redruth, on Thursday week—Mines and parcels.—West Seton 563—East Pool 168—South Crofty 112—South Frances 78—Carn Camborne 60—Tincroft 52—Treavean 35.—Total, 1069 tons.

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THE PRACTICAL MINERS' GUIDE:

Comprising a SET OF TRIGONOMETRICAL TABLES, adapted to all the purposes of OBLIQUE or DIAGONAL, VERTICAL, HORIZONTAL, and TRAVERSE DIALLINGS; with their application to the Dial, Exercise of Drifts, Lodes, Slides, Levellings, Inaccessible Distances, Heights, &c.

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Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt: it then forms an accumulating useful work of reference.

BORING MACHINERY—"T. D." (Royal Exchange).—During the past few years quite a number of inventions relating to boring machinery has been brought forward. There was an excellent hand-boring machine, by Messrs. Abegg and Richards, which worked most satisfactorily; and there have been several for the use of steam, compressed air, &c., which may be divided into two classes—those which excavate the entire tunnel, and those which merely bore the holes to receive the charges of gunpowder. Of the former class, the machines of Capt. Beaumont and of Captain Penrice have received the greatest favour, whilst of those for drilling bore-holes the machines of Mr. F. B. Doering, and of General Haupt (in its improved form) have proved themselves capable of giving very good results.

EAST WHEAL LOVELL.—Can anyone advise me how to act to compel the purser or manager to make up accounts and call meetings at their proper time? I complain that they have had no meeting for eight months, whereas they profess to hold one every four months, and which I say should be held, whether accounts are favourable or otherwise. Next, in the last balance-sheet they have only given the debit of expenses including last September, whereas they have taken credit for sales—Oct. 20, 541*l.* 18s. 6d.; Dec. 2, 771*l.* 15s. 6d.; and Jan. 25, 1045*l.* 4s. Now, two of these credits have no right to be put in with debits only to end of September; and a meeting held on Jan. 26 should contain October, November, and December costs.—I. C.: *Manchester, Feb.* 15.

PENDARVES UNITED MINES.—You have on several occasions drawn attention to the manner in which the affairs of this company have been managed, the large debit balance, and other matters that have told to such a great extent against the mine; but I have just been favoured with a notice convening the next general meeting, to be held on the mine, to which is appended the following clause—"The term of the lease of Condurrow, originally granted to the late Capt. Vivian, having expired, and a new lease granted to *me*, with extended limits, at the close of the above meeting another will be formed, when every shareholder, by signing the new cost-book, will have the opportunity of retaining the same interest in the new company he held in the old. (Signed) REGINALD T. GRYLLS." This certainly strikes me as being, to say the least, very cool. I should have thought that, after the amount we have spent, and are still liable for, the new lease would have belonged to us collectively, and not to the arbitrary *me*, so carefully called attention to in the above clause.—A SHAREHOLDER: *Camborne, Feb.* 15.

SHARE DEALING.—We never interfere in the sale or purchase of shares; neither do we recommend any particular mine for investment or speculation, or broker through whom business should be transacted. The addresses of most of the latter appear in our advertising columns.

*** With last week's Journal a SUPPLEMENTAL SHEET was given, which contains—Mr. Warington Smyth's Lectures at the Royal School of Mines—Boring by Machinery in Australia—The Haulage of Coal: Abstract of Report of the Tail-Rope Committee, appointed by the North of England Institute of Mining Engineers—The Heaton Process of Steel Manufacture (*illustrated*)—Improvements in Water-Wheels—Consumption of Coal on Railways—Holmes's Improved Stone-Dressing Machinery (*illustrated*)—Foreign Mining and Metallurgy—New and Cheap Mode of Extracting Gold from Quarts, &c.

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, FEBRUARY 20, 1869.

COLLIERY FATALITIES.

"This is one of those things which have occurred, do occur, and will occur in mines while we get coal." These are the words of Mr. PETER HIGSON, one of Her Majesty's Inspectors of Mines, whilst he was under examination at the concluding inquest, on the 11th inst., upon the nine deceased men who were killed by the accidents at the Rainford Colliery, on Jan. 7. Seven men met their deaths by incautiously remaining on the unsafe side of a fire, which had arisen from the furnace. Efforts had been made to put out the fire by water, and, as was to have been expected, resulted in the bringing down of a portion of the roof, and the fall drove the flame back upon the men. They had gone down to put the fire out, and after doing their best, and whilst waiting for the completion of adequate measures were drying themselves at the fire, when the reversal of the current happened. Their safety would have consisted in their remaining about the pit eye. And if hereafter colliers should be called to act under similar circumstances, overlookers and others would do well, having made a note of what has occurred, to strictly enjoin them of the course they must pursue. In the words of Mr. HIGSON, spoken at the Haydock inquest, "You cannot possibly caution them too much. They must be kept alive by warnings and cautions." This was said in relation to firemen, who every day of their life a colliery manager ought to teach, and lecture, and caution, "if he means to steer clear of casualties." If this be true of firemen, who, although they are drawn from the ranks, yet are a superior class of workmen, how much more is it true in reference to the inferior class? There is as much need for this constant iteration in the cautioning and instructing of the mass of our miners as there is for the "line upon line, and precept upon precept," in the training of a child, and he will be a wise man who regards the necessity for this as scarcely less imperative than the consequences to which the more authoritative injunction is to be traced. Life on this side the grave is only a little less sacred than life beyond it.

Firemen and colliers are not the only people who need to be warned and instructed—our underlookers have yet much to learn. The remarks of Mr. HIGSON, with which we have opened this article, are applicable to unavoidable accidents, and the question that arises when they occur is how to deal with them in the best and most decisive manner. To put water on the fire in this case was not the best and most decisive method. "But," as Mr. HIGSON observed, "the underlooker had no doubt seen it done, and he did it again. He did his best, but his best was not the best thing to do." Mr. HENRY BRAMALL, of Mostyn, in North Wales, who is the engineer and viewer of the Rainford Colliery, and who, in the ordinary course of things, visits it once a fortnight, would not have used water, but would have closed the pit; and so would Mr. HIGSON. Arrangements to do this were begun directly that Mr. BRAMALL arrived at the colliery. The two pits were closed, and steam was sent in from all the boilers. By the falling in of the scaffold covering one of the shafts the eighth and ninth deceased perished. In the night, believing they were leaping upon it, they fell to the bottom. The erection had, in all probability, been brought down by an explosion. The men had been cautioned, it was stated, not to get on the scaffold. It is not too much to suppose that for some time to come we shall ventilate by furnace in very many instances, even though the vexed question of mechanical or furnace ventilation should be decided in favour of the advocates of the former system. Accidents by fire may, therefore, be looked for. But equally it is not expecting too much when we hope to find that underlookers called upon to act in an emergency of this class will not resort to water, but will close down, and having done so, will enjoin with much conspicuousness, that the men keep off the scaffolds. This anticipation is founded more upon the growth of correct trade knowledge than the result of precedents. It is ardently to be desired that what Mr. DAGLISH and other mining engineers are doing in the North of England, in providing certificated teachers to impart instruction of a technical character thoroughout the colliery villiages in that part of the kingdom, will be imitated in the Wigan and in every other district. If this should be done, results of inestimable worth will ensue; and too much importance cannot be attached to the immense worth in this direction of the lectures which are now being given at the Royal School of Mines, Jermyn-street, by Mr. WARINGTON W. SMYTH. If underviewers and others cannot attend these lectures, we are not, we hope, saying too much in our own praise, when we remark that as far as they can be reproduced within a moderate compass in print, our readers have them in the columns of the *Mining Journal*. Nothing could be more easy than for superior employees to get together the men under them, and having first well studied the summaries prepared to their hand in these columns, present them, if they like, chiefly in their own language, for the edification of the men. We venture to assert that no Penny Readings would be found half so attractive. There is room for all to work, and there is need that all should work. Mr. SMYTH is doing his part; we hope we are doing ours; Mr. DAGLISH and his friends are doing theirs; and we call upon everyone else upon whom, from their position over them as directors, the men have a claim to go and do likewise, or as much better as they can. The mining engineers on most hands are paying great attention to their own technical advancement. If the result is to be as beneficial to the trade and to the nation as it should be, the men too must be taught.

It is only partially true that:—

"While dangers hourly round us rise,
No caution guards us from surprise."

The caution resulting from accurate knowledge of the precise character of the danger is an immense protection to a man against the incaution which is provoked by his constant association with danger. It is impossible to believe that the two colliers who, by their utter disregard of their own and others safety, killed themselves and a companion, and injured nine others, on Tuesday, last week, at the Fforchaman Colliery, Cwmaman, Aberaman, would have fired powder under the circumstances by which they were surrounded, and contrary to repeated warnings not to do so, if they had been as well informed as we hope, by-and-bye, will be the happy lot of even our Welsh colliers. Nor is it other than difficult to suppose that if the unhappy man HARRIS had not been thoroughly ignorant he would on the following day have caused his own death and that of three fellow-workmen, with personal injury to six more, at the Wood Shutts Colliery, Talke-o'-th'-Hill, by working with a naked light in a pit which was known to be gaseous, and where only safety-lamps were allowed. The inquests on the Welsh and also the North Staffordshire accidents have yet to be completed. They will both show that there is still an unhappy want of discipline throughout both those fields. This state of things was patent in connection with the fearful accidents which retain a vivid place in the memory. Until, however, the Coroners and their juries have done with the cases we shall not further treat of them in this place. We remark that want of discipline in a pit is only another evidence of want of accurate mining knowledge.

ADVANCE IN SOUTH STAFFORDSHIRE.

The skips of South Staffordshire have long been a subject of interest to the managers of collieries where the science of mining is supposed to to have more headway. The antediluvian character of the machine, with its numerous rings, is very striking. As compared with the North of England tub, it occupies about the same relationship as the bullock-drawn wagon of the East does to the model cart of the last Royal Agricultural Society's Show. But it has had its day. Wherever an opportunity arises it is being made to give place to the tub. Not a great while ago the present secretary of the Mining Association of South Staffordshire and East Worcestershire drew the attention of the trade to this cumbrous machinery, and showed how wasteful it was, alike of time, of physical strength, and of property. The coal is piled upon a small platform on wheels till, assisted by rings, which are clapped on as the pile grows, sometimes the mass attains the height of 8 ft. from the floor. It is, therefore, clear that half the whole has to be lifted overhand by the loader. The waste of time and energy resulting from this operation must appear to everyone. In loading the tub no such violent effort is necessary. The coal is not smashed, as it is in throwing it into a high skip; nor, after it has attained the surface, and is being run down the tramway from the pit's mouth, is there the waste by falling off that attends the use of the skip. These considerations have influenced some of the first men of the mining engineering craft in South Staffordshire to determine upon the substitution of the tub for the skip; and we are happy to be able to state that this mark of progress is becoming more conspicuous in South Staffordshire and East Worcestershire almost every week.

COLLIERY BOILERS, AND GOVERNMENT HELP.

The explosion of the colliery boiler at Greet's Green, in South Staffordshire, has been thoroughly investigated. It turns out, as we ventured to suggest at the time of the accident, that the cause of the explosion was simply that the boiler was old, and had been so frequently repaired and patched, that it was unable to bear the usual working pressure. It is too often supposed that patching a boiler restores it to its original strength, whereas this cannot be the case, however skilfully it is done, as the new metal is frequently of a different texture to the old plate surrounding it, and expands and contracts in a different degree, causing strain upon the old work, and generally reducing the total strength of the boiler. The safety-valve was needlessly overloaded, so that it would not have relieved the boiler until the steam had risen much beyond the usual working pressure. And as the gauge was some distance from the boiler, and could show only the varying pressure in the main steam-pipes, the pressure may have been higher than usual at the time of the explosion; but such was the condition of the boiler that it was not necessary to suppose much beyond the usual working pressure to cause the explosion. This is the substance of the report upon the accident of Mr. E. B. MARTEN, the chief engineer of the Midland Steam-Boiler Association, prepared upon the coroner's instructions. The jury, upon it, returned a verdict of "Accidental Death," and were also good enough to append to their verdict that no blame attached to Mr. KENDRICK, the proprietor, or to his engineer. Mr. KENDRICK has, however, acted wisely in determining to remove the sister boiler, and replace it with a new one.

The jury recommended that Government should appoint Inspectors of boilers. It is true that the British Government has recently displayed a very paternal care for its fellow-subjects, and if the Unionist colliers are correct in their anticipations, all has not yet been done which may be looked for in this direction. But it is by no means conclusive that this characteristic of modern legislation will be displayed in respect of the special oversight of steam-boilers. Private enterprise has met the requirements in this direction; and the Government could not find men better qualified, as a rule, to do the work than that enterprise furnishes. We sympathise with a remark which we see reported from the part of the kingdom in which this accident occurred. A member of one of the Local Boards of Health in the Black Country is set down as having remarked, in connection with a suggestion upon a somewhat similar subject, that they did not want any more Government Inspectors in their locality. And it may help people who look for practical sympathy from Government in the carrying out of any pet scheme, whether it be the freeing of the ocean tracks from bottle-nosed highwaymen, or the finding of employment, at the cost of the nation, for certain colliery Unionists, to bear in mind that in his speech at Gloucester, the present CHANCELLOR of the EXCHEQUER denounced the "fashion" which these applications for help to Government had lately originated.

SCHOOL OF MINING FOR GLASGOW.

It gives unfeigned pleasure to observe that another attempt is being made to establish a school for education in mining in Glasgow, and this time it is to be associated with facilities for studying geology, mineralogy, chemistry, and engineering at the same time. It will be in the recollection of our readers that the coal and iron masters of Scotland a few years ago took the initiative, and bore a large part of the expense, in originating a lectureship on mining, in connection with the Andersonian University, Glagow; but it was so little prized by the mining population that, after a couple of sessions or so, it was abandoned, as unproductive of stimulating miners to the study of scientific mining. The period of study was short, the fees nominal, and the desirable advantages great; yet, at its best, it was patronised by a most insignificant fraction of the 45,000 miners which Scotland sustains. Many a collier, by denying himself his monthly "booze," might have bettered his condition for life; and many a daring fellow, by the study of a session or two, could have made a scientific application of that daring in underground workings, where he might have been instrumental in saving life, instead of, in his ignorance, jeopardising his own and his fellow-workers' lives by his recklessness, and throwing the onus of a serious litigation on their masters at the same time. We do not for a moment deny that a miner's life is beset with difficulties; but these difficulties may be greatly diminished by a little study and forethought. The subtle gases which come in upon and flood or surround them are dangerous from their insidious, penetrating, and infolding power; but yet the scientific observer can discern their stealthy approach, and warn all around of their coming. But if, with all the facilities which are afforded miners of avoiding the dangers incident to their calling, they persist in keeping themselves ignorant of their existence, they need not longer complain in the ears of the public of accidents which might have been very much mitigated, if not averted, by the operation of means which were at hand.

At a meeting of the Philosophical Society of Glasgow, last week, the President (Dr. BRYCE) proposed the following motion, of which notice had been given at the previous meeting:—

"A proposal having lately been brought before the public for the establishment of a lectureship on practical mining in this city, the Philosophical Society of Glasgow hereby desires to express its warm approval of the same. The society is of opinion that Glasgow is in every respect the most suitable place in Scotland for the institution of such a lectureship, for the following reasons:—1. No such lectureship exists in Scotland.—2. Glasgow is the centre of mining and metallurgic operations, which give employment to a vast population requiring instruction in everything relating to mines and mining.—3. An Engineering School is already connected with our University, needing only the addition of one other lectureship to form a complete Mining School."

The President supported his motion at some length, and Mr. CROSSKEY "pointed out the advantages of such a lectureship to the owners of mines, and to the mining population. He added that it was proposed that the lecturer should not only deliver a stated course of lectures on mining and metallurgy, but that he should visit the mining districts and communicate instruction to miners on the various operations in which they are employed." The motion was unanimously agreed to, and we trust the miners will give themselves now more to study, with a view to their elevation, than to strikes, which latter have been a fruitful cause of their misery and their demoralisation. We wish the Glasgow Mining School abounding success.

STANNARIES LAW AMENDMENT.—The draft of the Bill to be submitted at the next meeting of the County Committee has now been printed. Amongst the new clauses introduced are one giving power for the Registrar to issue injunctions on motions of course, and one which provides that "a company shall not be bound to recognise a transfer of a share made for the purpose of getting rid of the further liability of the shareholder as such for a nominal or no consideration, or to a person without any apparent pecuniary ability to pay the reasonable expenses of working a mine, or to a person in the menial or domestic service of the transferor, and the same shall be presumed to be a fraudulent transfer." As the Bill will be re-discussed on Monday at the meeting of the County Committee, to be held at the Royal Hotel, Truro, we have deemed it desirable to defer its publication until next week, when we shall give it *in extenso* in a Supplemental Sheet. The Bill can be inspected at our office.

THE WELSH COAL TRADE.—That the coalmasters habitually pay their colliers more than is paid by the ironmasters, for the same amount of work of the same character, has long been a subject of complaint; and from the letter of "Equality," in another column of this day's Journal, it will be seen that the coalmasters are now about to bestir themselves to remedy the evil, by fixing the scale according to the ironmasters' standard. The absurdity of payments for the same work varying from 25 to 133 per cent., according as it is paid for by a coal-owner or by an ironmaster, is obvious; and in the present position of affairs the only course that can be adopted is to lower wages, and thus continue the competition with other countries and districts.

RAIL EXPORTS FROM BELGIUM.—The total quantity of rails exported from Belgium in the first eleven months of 1868 was 67,386 tons, as compared with 76,967 tons in the corresponding period of 1867, and 62,674 tons in the corresponding period of 1866. The exports of railway iron made from Great Britain in the first eleven months of 1868 were 544,579 tons, as compared with 552,037 tons in the corresponding period of 1867, and 468,615 tons in the corresponding period of the year 1866. The best customer of Belgium for rails is Russia, to which Belgian rails were sent in the first eleven months of 1868 to the extent of 44,590 tons, as compared with 63,895 tons in the corresponding period of 1867, and 32,416 tons in the corresponding period of 1866. Even in Russia, however, Belgium is outmatched by Great Britain, which sent 101,286 tons of railway iron to Russia in the first 11 months of 1868, against 125,898 tons in the first 11 months of 1867, and 55,441 tons in the first 11 months of 1866. The Belgians have made some attempts to cultivate rail relations with the United States, but in this they have not met with much success at present, the exports of Belgian rails to the great American Republic having been 5378 tons, as compared with *nil* in the corresponding period of 1867, and 1480 tons in the corresponding period of 1866. The exports of railway iron from Great Britain to the United States expanded from 96,814 tons in the first eleven months of 1866 to 157,335 tons in the first 11 months of 1867, and 248,246 tons in the first eleven months of 1868.

FUEL ECONOMISER, AND FEED-WATER HEATER.—Mr. RICHARD NEEDHAM, engineer, of Dukinfield, has specified the particulars of his invention, which consists of two chambers, communicating with one another by means of a number of tubes. These chambers may be made of any suitable shape, but he prefers to give them a circular form, so that the whole forms a vessel of a cylindrical shape, having a chamber at each end and a number of tubes reaching from one to the other. These chambers are provided with hollow trunnions, and the vessel is arranged so as to rotate, and so expose each portion of the surface equally to the heat. The apparatus should be fixed in the flue between the boiler and the chimney, so as to be acted upon by the waste heat. One of the trunnions is connected to the water feed pipe, and the other communicates with a pipe leading to the boiler. The action of the apparatus is as follows:—The water being forced in passes through the trunnions into the chamber, and thence along the pipes in a number of separate streams to the other chamber, being heated in its passage; it then passes through the other trunnion and pipe into the boiler. The vessel may be arranged so as to rotate either horizontally or vertically. When arranged to rotate on a horizontal axis the rotation is produced by means of the combined effects of the steam, which may be produced in the vessel, and the force of the feed-water as it enters. To accomplish this Mr. Needham forms an Archimedian screw in each chamber, with boxes of suitable form, so that as the steam rises in them at one side the weight of the water at the other side causes rotation. This effect may be increased by projecting the feed-water in a jet against the boxes. The rotation might also be produced by well-known mechanism. In order to remove the soot each tube is provided with a

scraper, which is in the form of a long blade reaching the full length of the tube. These blades are not attached direct to the tubes, but to weights, which retain a vertical position; so that, although the scrapers are carried round by the tubes as the vessel revolves, they keep an independent position, the effect of which is that the surface of each tube is passed under the weight of its scraper, and thus cleared of any adhering soot at every revolution. When arranged to rotate on a vertical axis the rotation may be produced by well-known mechanism, and to clear the tubes of soot he uses a scraper, which is in the form of a plate perforated with a number of holes to correspond to the tubes. This scraper may be moved along the tubes by means of a screw working in a nut, or by means of a chain attached thereto. This form of scraper may also be applied where the vessel is arranged to work on a horizontal axis; or blades, such as already described, but worked by means of mechanism, may be used either for the vertical or horizontal apparatus.

MINING, METALS, AND MINERALS—PATENT MATTERS.

BY MICHAEL HENRY,

Patent Agent and Adviser, Memb. Soc. Arts, Assoc. Soc. Eng.

Mr. J. BRIGGS, of Barrow, Lancaster, ironfounder, has specified an invention relating to the construction of ingot moulds. According to this invention, a mould is made of cast, wrought, or sheet iron in one, two, or more pieces, of any shape and of any thickness, according to the size of the ingot to be cast. One or more hoops of iron are then placed around it, to afford temporary support. Around this is placed a box of sheet, wrought, or cast iron, of a thickness and depth according to the size of the ingot to be made. At the bottom of this box a piece of angle-iron is placed so as to form a bottom for the box. The mould is then placed upon a bed-plate in common use. The space outside the ingot-mould is then filled up, or lined, with sand such as is commonly used by iron-moulders, with any other material until the space is filled up. The lining is then smeared over with a mixture in common use, or the space may be rammed up with sand and clay, or loam, and dried in the usual way of loam work; or the box may be made sufficiently long to receive two or more moulds, the space being filled up in the same manner as for single moulds.

Mr. E. H. NEWBY, of King William-street, has obtained a patent for reducing aluminium from its ores or earths, and in producing alloys therefrom. (Communicated to him from abroad by Anthony Leonard Fleury, of Boston, United States.) The chief features which constitute the novelty of this invention are—Firstly, a method of reducing aluminium from its oxides, salts, and earths by the admixture of hydrocarbon, and the subjection of such mixture to heat in a retort under pressure of hydrocarbon gas injected by a force-pump or otherwise, or of carbon, in process of generation, whereby the aluminium is reduced to a spongy mass in connection with carbon. Secondly, the treatment of the product by the addition of zinc in the process of re-melting in a covered crucible, and the consequent elimination of the zinc by volatilisation or sublimation; and, thirdly, the production of alloys of aluminium by the admixture of the respective metallic oxides and hydrocarbons, or of the spongy aluminium oxides and hydrocarbon, or of aluminium and copper.

EXPLOSIVE COMPOUNDS.—Mr. Wm. Shaen, of Bedford-row, (for M. Schultze, of Potsdam), has patented the combining with nitro-glycerine the explosive substance called "wood powder," prepared according to Ernst Dronke's patent (No. 900), which invention was a communication to him from M. Schultze, and with the compound so formed may be mixed the explosive substance termed "dynamite," or other explosive substances possessing analogous qualities. The compounds so formed, by combining nitro-glycerine with wood powder, alone or together with other explosive substances, will be found very useful for mining and other purposes. The proportions in which the substances should be mixed will vary according to the purposes for which the compounds are to be used, and the degree of strength and quality which it is required that the compound produced should possess. It has been found that a good blasting-powder may be made by mixing 10 parts of nitro-glycerine with 90 parts of Schultze's powder, but the proportions must be varied according to the hardness of the rock or other substance which is to be operated on; the hardest rock requiring, as a rule, a comparatively small proportion of nitro-glycerine. On Wednesday some experiments were made with the new powder near Wandsworth, in consequence of an application for a license to manufacture the powder in that locality. The experiments were most satisfactory. The advantages claimed are—safety and rapidity of manufacture, and consequent reduction of cost; safety in transport and storage; less injury by absorption of damp; diminution of recoil; ample driving force; the power of regulating its rending force; and the absence of fouling. As to the safety of the Schultze powder, it should be mentioned that it may be transported in a moist, and, consequently, non-explosive state.

LOCOMOTIVE RENEWALS.—During the half-year ending December, 1868, the London and South-Western Railway Company built six large goods engines at the cost of revenue; these, with six built in the half-year ending June, 1868, make 12 engines constructed in the past year and paid for out of revenue, as compared with nine engines similarly constructed in 1867. Six passenger engines will be completed at the cost of revenue in the course of the ensuing summer. During the past six months 15 engines have been entirely replaced by the London and North-Western Railway Company, and 51 have been re-built at the cost of revenue. The number of replaced engines actively at work upon the line, and only standing on the books of the company at their value as old materials, is now increased to 177. During the past six months the Great Northern Railway Company renewed 20 engines at the cost of revenue. The Midland Railway renewed 12 engines in the same period at the cost of revenue.

GOVERNMENT PURCHASE OF THE IRISH RAILWAYS.—We have reason to believe that it may now be considered definitely settled that the Irish Railways will not be purchased by Government—Mr. Gladstone having been outvoted at the Cabinet Council at which the question was brought forward. As an alternative, which met with some favour, it was proposed to grant a general permission to consolidate, regardless of the existing private Acts, but whether the railways of Great Britain will be included in the arrangement, or whether it will apply only to Ireland, is not yet settled.

CHANNEL RAILWAY.—We find that the two projects for carrying this much-desired object into effect, for which plans were deposited for this session in Parliament, are both withdrawn. It is probably this which has encouraged Mr. Austin to bring forward his project of a tunnel; but the French Government having several times had before it and rejected a scheme for a tunnel, and the plans for it having just been withdrawn here, it is not considered likely the French Government will again be disposed to listen to it, especially as the Emperor is known to approve very highly of M. Boutet's proposal for a bridge, a model of which, as was noticed in a recent Journal, is about to be exhibited in one of the French public buildings, with the sanction of the French Government. There can be no question that a bridge, if it can be made, would be far superior to a tunnel; that under the Thames, which is the only instance in which a tunnel under water has been used as a medium of communication for passengers, being a standing witness to the difficulties which attend the construction of such a work, and its use when completed. We heartily congratulate our French neighbours on the spirit with which they are investigating the bridge project, which is believed to be the only practicable way of connecting the railways of the two countries, and it is hoped the success with which their perseverance in the Suez Canal has been attended may await their project of a Channel Railway Bridge.

IMPROVEMENTS IN CASTING METALS.—An interesting paper has been read before the Cooper Institute, New York, by Mr. JAMES HARRISON, on "The Casting and Forging of Metals," in which he pointed out that in the preparation of the mould to receive the metal there were several important points to be considered—the loam or sand must be prepared to suit the required kind of work, and especially the size of the piece; provision must also be made for the escape of the air from the mould, and of the gas generated by the contact of the hot metal with the cold loam. For facing, to give a smooth finish to the work, various materials, such as powdered charcoal, plaster of Paris, &c., are used. If the facing be too thin, the metal will eat through the sand, and the work will be rough; if too thick, the pores will be stopped, and the confined gases will burst the mould. The vent is provided for the escape of the air and gases from the mould when the metal is poured in. Should the vent be too open the gas will rush through too fast, tearing away the walls of the mold, and allowing the metal to follow, to the destruction of the casting. Again, if the vent is too small, the confined gases will cause the metal in the mould to flutter, until the casting is destroyed by the escape of gas through the surface of the metal. To obviate this danger, Mr. Harrison proposes a riser, which consists of a conical hole in the mould filled with soft clay, to which a suitable weight is attached according to the size of the casting. If the gas escaped by its proper channel the weight would be undisturbed, but if the mold had been made too close, so that the gas could not thus escape, then the gas lifting the clay and weight would escape. The common method of pouring the metal from a ladle into a duct to be conveyed to the mould has a great disadvantage. The skimming of slag and dross from the surface of the metal while being poured from the ladle is a very difficult operation. To overcome this difficulty the use of a self-skimming runner is proposed, so that the metal reaches the mould in a purified state; he remarks that the size of the runners is a matter of considerable importance. Referring to the temperature at which the various metals should be poured, Mr. Harrison attributes nine-tenths of the bad castings to the want of a proper means of testing the temperature of the molten metal at the time of pouring, and observes that a pyrometer, suitable for performing such a test without injury to itself, would be a highly desirable and remunerative invention.

REPORT FROM NORTHUMBERLAND AND DURHAM.

FEB. 18.—The Steam Coal Trade in Northumberland continues very bad, on the whole, and many families are, in consequence, very ill provided for. A migration of miners has already commenced southwards, and many have found employment in Central and South Durham. The trade in Durham is tolerably good, although dulness is still complained of in some parts. The gas coal and coking coal trade is tolerably active, but the house coal trade continues flat, and prices are drooping in consequence. Generally speaking, the state of trade is not very encouraging, and the improvement which was expected to take place in the present year has not yet been realised—indeed, depression is still too much the rule.

The Iron Shipbuilding Trade is almost the only one in the North which shows much activity; some good orders have, indeed, been received lately in the engineering shops and iron works. Among the rest, an order has been got by Black, Hawthorn, and Co., of Gateshead, for 30 locomotives for America.

In the Iron Trade prices are quoted the same, but the market is weak. As was remarked in this letter a short time ago, the late rise in the price of iron was mainly brought about by speculators, and orders given for forward delivery. Now that additional orders are required they are not so abundant, and prices scarcely so buoyant as before. Still a great amount of work is brought forward for ship and angle iron, and some good orders for heavy rails have been received lately, so that, on the whole, the mills and furnaces of Cleveland are pretty well employed. The prices quoted are—No. 1, 49*l.*; No. 3, 46s.; and No. 4, 45s.

The Miners' Provident Society continues to make progress, although that progress is much too slow, and it is to be lamented that the men do not avail themselves of the advantages to be derived from the society more generally. The weekly allowance made to widows would have been of the greatest service to some who have been deprived of their bread winners by the late accidents. A meeting was held at the Framwellgate Moor Colliery a few days ago, in order to promote the objects of this most useful society, which was well attended, and he meeting was most successful in every respect. The schools for imparting technical education are making good progress, and should the coal trade revive, which is most devoutly to be hoped for, a great advance in the knowledge which is so much required by the overmen and other officers in collieries may be confidently expected.

The yearly report of the River Tyne Commissioners contains facts of a most interesting kind, bearing on the coal and other trades of the district. It appears the income was 68,970*l.* 10s. 10d. The total ordinary expenditure, including interest on the debt, the working of the ferries, and dredging for maintenance, was 56,681*l.* 0s. 9d., leaving a surplus revenue of 12,289*l.* 10s. 1d. The outlay on new works and improvements was 99,698*l.* 1s. 11d. Deducting from the above the aforesaid 12,289*l.* 10s. 1d. leaves a balance for expenditure over income of 87,408*l.* 11s. 10d., which is met by the exercise of the Commissioners' borrowing powers. The total mortgage debt is 789,587*l.*, the borrowing powers extending to 997,349*l.*—Mr. J. B. Dale observed that, considering the reduced quantity of coal shipped in the Dock during the year, and the general depression of trade, the report just read was very favourable. The Tyne had necessarily suffered from the general depression, and had also sustained loss through the preference which was at the present time being shown in favour of Welsh coal. Considering these facts, however, the Commissioners ought to be gratified that the decrease of revenue had not been more than 3000*l.*, and had it not been for the exceptional claim for 800*l.* it would have been smaller.—Mr. Guthrie said that the export of coal from the Dock had been 1,797,460 tons in 1868, against 1,964,785 tons in the previous year, showing a decrease of 167,000 tons.—Mr. Mease agreed that the withdrawal of the Government contracts for coal had entailed a great loss upon the Tyne, and he hoped the Chairman, with other representatives of the boroughs and counties, would do what they could to recover for the Tyne a fair proportion of the trade. —The Chairman promised with pleasure to do all he could; it was, in fact, his duty to do so. The coalowners were taking very proper and prudent steps to bring the matter before the authorities, and he, in common with other members for the district he believed, would be prepared to support their case. He should be delighted in being able to aid in restoring the trade, which had been unfairly withdrawn, for he most conscientiously believed that they were fairly entitled to participate in the contracts, both as a matter of economy to the nation and of benefit to the locality.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

FEB. 18.—There is not much to report with regard to business in Derbyshire, further than the fact that both the Coal and Iron Trades are in a depressed state, and the workmen far from being fully employed. This is the case almost from North to South. The only exception of any note is that relating to the works at Langley Mill, where there is a great deal of activity in the production of steel by Mr. Heaton's process. In coal there is by no means an average quantity for the season being sent away, the London trade in particular still continuing quiet, with very little prospect of a change for the better. In Sheffield several branches of the trade show signs of improvement, and the tone is altogether more cheering than it has been, and there is every prospect so far of a tolerably good spring business, both for home use and exportation. In the Rotherham district the iron trade is better than it has been, and matters are so far satisfactory. At the works at Milton and Elsecar there is considerable activity in nearly all branches. The orders for rails have been so large of late that the Messrs. Dawes are about to put down a new rail mill, to meet the demand which is made upon them. There is also rather more doing in Bessemer rails, tyres, &c.

The South Yorkshire Coal Trade has still to be pronounced very quiet, but a change is now imminent, whether for the better or not a short time will show. One thing, however, appears certain, that a trial of strength between the coal owners and some of the men is not at all unlikely. For some months past the demand for nearly all qualities of coal has been such as to compel the coal owners to reduce their prices considerably, so as to keep their pits going three or four days a week. They memorialised the Great Northern Railway Company for a reduction of the rate to London, so as to allow of their coming on more even terms with the Derbyshire coal owners, who have the great advantage of being from 1s. 6d. to 2s. per ton nearer to the metropolis. So far the memorial has been ineffectual in producing any change, and the result of the existing rate has been to lessen the trade from the district, not only to the loss of the coal owners, but in a still greater degree to the railway company itself. We have it, however, on good authority that a meeting between the Great Northern and the Midland directors has been fixed for to-day, for the purpose of altering the rate to London. Should both companies reduce their present rate on their respective lines to the same extent, the benefit to the South Yorkshire coal owners will be infinitesimally small. Still, whatever the reduction may be, we believe it is the intention of the colliery proprietors to ask their men to submit to a reduction of from 5 to 10 per cent., as by such means alone can they go into the markets they have hitherto been doing business in, but in which they have been supplanted by producers who have been more favourably situated. In May last the miners accepted a reduction to the extent of 5 per cent., but in October last a good many of them were prepared to strike, for the purpose of recovering it back again. It is, therefore, very likely that any attempt to reduce wages still further will be stoutly opposed, and a struggle of no ordinary character may probably ensue. The leaders of the Miners' Association, who are well acquainted with the actual condition of the trade, and are amenable to reason, are placed in anything but an enviable position, seeing that in carrying out what they believe to be right they are assailed for so doing by the violent and ignorant, whom no argument can reach that has for its object the withdrawal of a shilling from their pockets, no matter how desirable, even for their own sake. Such is the state of affairs in South Yorkshire at the present time, and the next two or three weeks will doubtless bring things to a crisis. With regard to the recent reduction made by the Manchester, Sheffield, and Lincolnshire Railway Company for the carriage of coal to Staleybridge and other places, it has worked so far satisfactorily, increasing the trade, and so adding materially to the revenue of the company. The strike at Mr. Huntsman's collieries, near Sheffield, still continues, and is likely to do so, as both parties appear equally determined. The men who are out were paid on Saturday last from the funds of the Miners' Association, in sums varying from 8s. to 15s. each, the smaller sum being paid to the single. At Denaby Main the notice of the men has not yet expired, and, so far as can be ascertained, there is no change in the position of either party. The only dispute of any consequence is as to whether the men should join the association, seeing that when engaged it was distinctly stated that no Union men would be employed. There is a strong feeling in the district that the men will not be required to leave.

Mr. Abner Thorpe's patent safety-cage apparatus was publicly tested at the Butterley Company's Waingroves Colliery, on Tuesday, in the presence of from 400 to 500 people. Amongst those present were Mr. Robert Argyle, Butterley; Mr. Tomlinson, Denby Iron Company; Mr. Peach, Waingroves Hall; Mr. Hewitt, Morley Park; Mr. Allsopp, Pinxton; Mr. Thorman, mining engineer, Butterley Company; Mr. Parkin, Denby Iron Company; Mr. Brown, Stoneyford; and several other engineers and colliery managers, all of whom appeared deeply interested in the experiments, which answered the most sanguine expectations. Mr. Thorpe tested the strength of his patent with a loaded trolley, which, with the cage, weighed 35 cwts., but his spring held it firmly clasped to the slides of the shaft. Mr. Thorpe next showed that it was impossible for any accident to occur by being taken up to the wheel. He announced his intention of personally trying the test, and accordingly gave instructions to the engine driver to put on steam and drive at full speed when he gave the signal. He then stepped on the cage, and was lowered to the bottom of the shaft; the signal to go on was given, and at race-horse speed the cage ascended the shaft; the rope detached itself and bounded over the wheel, leaving the cage with its courageous inventor suspended below the wheel, as safe as if he had been on *terra firma* instead of being over a yawning guif. In five minutes the rope was again fixed, and all was in working order. The experiment was greeted with tremendous cheering from the assembled multitude, who one and all expressed their utmost confidence in the patent, and were quite willing to trust their lives with it. Mr. Moore, of Sheffield, is the maker of the patent spring.

The South Yorkshire Miners' Association had a large gathering at the Prince of Wales Hotel, Wombwell, on Monday, when upwards of 130 sat down to dinner. The chair was taken by Mr. Normansell, who, in reviewing what the Association had done since its establishment, noticed the lock-out in 1864, which lasted 19 weeks, when the men with their families existed on 5s. 6d. per week during the whole of that time. Since then their Association had increased to a greater extent than any other similar body in the kingdom, and at present they had 8000 members on the books, and a fund at their back amounting to 10,000*l.*, and had paid since the accident at the Oaks Colliery upwards of 6000*l.* to the widows and orphans in weekly payments. It had been said that the Widows and Orphans' Fund would destroy them. That he never believed; but even if it did, they would be destroyed in a great and good cause. (Cheers.) Since the society had been in existence it had done much, and now had been recognised by the colliery proprietors of South Yorkshire, with the exception, perhaps, of Mr. Huntsman. He trusted that those present belonging to the Association when they went back to their various lodges and found waverers would tell them of the spirit which actuated the meeting as to the future, and that there was no occasion to be in the slightest degree dispirited.

THE MINERS' NATIONAL ASSOCIATION.—The annual conference of the above association, which comprises upwards of 27,000 members, took place at the Treveylan Hotel, Manchester, and occupied three days. There were delegates present from Northumberland, South and West Yorkshire, Staffordshire, Wigan, Farnworth, Haydock, Kearsley, Scotland, &c. Mr. A. McDonald (the President of the association) occupied the chair. The appointment of officers for the ensuing year took place, when Mr. McDonald was re-elected President; Mr. J. Normansell, vice-president; Mr. Pickard, treasurer; and Mr. Nixon, secretary. Various questions affecting the mining body generally were then taken into consideration and discussed. A resolution appointing a committee to look after the interests of the miners so for as parliamentary legislation was concerned, with a view to watching any measures which may be brought forward, having for their object the alteration of the existing laws, was passed. It being the opinion of several of the members that a Bill founded on the Report of the Select Committee of the House of Commons, which sat to enquire into the operation of the existing Acts for the Regulation and Inspection of Mines, would be introduced during the present session, several of the recommendations of the Committee were discussed. The first general rule of the Act 23 and 24 Vic., c. 151, was taken into consideration. It is as follows:—"An adequate amount of ventilation shall be constantly produced in all coal mines or collieries and ironstone mines, to dilute and render harmless noxious gases to such an extent that the working places of the pits, levels, and workings of every such colliery and mine, and the travelling roads to and from such shall, *under ordinary circumstances*, be in a fit state for working and passing therein."

It was the opinion of the delegates that the words "under ordinary circumstances" took away the actual value of the other parts of the rule, and that they should be omitted altogether, without any qualification whatever. Such it was stated had been recommended by the Select Committee, so far as the omission of the words were concerned, but a rider was added to it, that magistrates should have power to dismiss any charge where all reasonable precaution shall appear to have been taken by the persons who would otherwise be liable to a penalty. The leaving the rule as it is at present, omitting the words "under ordinary circumstances," would, it was believed, lead to much more care being taken in the ventilation of mines and the non-accumulation of gas, and so give greater security to the working collier. The delegates were in favour of having a clause inserted in any Bill brought forward, limiting the working hours of boys between the ages of 12 and 14 years to 8 per diem, which they considered amply sufficient. The Committee of the House of Commons, in taking the subject in hand, regretted that boys should be employed in mines during the night, yet, as several of the delegates remarked, would only propose to limit the labour of boys under 16 to 12 hours per day. This the conference considered too many, seeing that in very many districts the coal-getter only worked 8 hours a-day, and it would, consequently, be hard to compel a boy to work more hours than a grown-up person. The question of the weighing of all coal raised to the pit-bank was considered by those present, who were all in favour of the Act being made compulsory, and the weighing-apparatus placed under the superintendence of the inspetors of weights and measures. It was considered that, in justice to masters and workmen coal could not be accurately measured, and that weighing in all cases was the best and surest plan, and that such should be proposed in any future measure introduced into Parliament for altering or amending the present laws. Exception was then taken by Mr. Normansell to that part of the 33d rule which alludes to a person injuring a safety-lamp, and in which it was laid down that a person "damaging" a lamp was liable to be fined or punished. He gave an instance where it was clearly proved a man damaged his lamp by accident, and was summoned for it. Where a lamp was wilfully, or even negligently, injured punishment should follow, but where it was the result of accident he thought such should not be the case. It was also considered necessary that in all cases where safety-lamps were deemed necessary in getting coal that blasting should not be allowed. Several other questions were introduced by the delegates and discussed. A resolution was unanimously agreed to for raising a fund in all the colliery districts connected with the association for the benefit of the widow and family of Mr. Ernest Jones, to whom it was agreed to forward a letter of condolence and sympathy in their great bereavement. A vote of thanks to the Chairman and other officials for their past services brought the conference to a termination. It may be stated that a strong feeling prevailed that the limits of the hours of boys working in collieries to eight per day and the compulsory weighing of coal would be carried, seeing that Lord Milton and several other Members of Parliament had promised to support clauses for those purposes.

REPORT FROM THE FOREST OF DEAN.

The trade of this district generally remains in *statu quo*, there is, therefore, little complaint among the miners and colliers, although the former mostly share better than the latter. The unusual mildness of the autumn of last year, and the total absence of winter up to the present time, have done but little towards creating such an active trade as was looked forward to. The coal proprietors and merchants must have suffered in consequence; indeed, such a season as the present has not been known, so far as it has gone, since 1842; there has, however, been more than an average rainfall, which has saturated the ground and the pores and crevices of the strata to such an extent as to put a temporary stoppage to several of the smaller collieries, where the machinery is antiquated or inefficient. This is more especially the case at the Brick Pit Colliery, where the method of draining the water out of the mine was by means of winding with buckets. The Flower Mill Colliery, near Parkend, is also laid down for three months, but the exact cause does not appear. Perhaps inadequate machinery has also to do with this. Some little progress is being made at the Bowson, or Great Western Deep Colliery, in Bilson Green, but when the engine and pumps will be brought into use is a question to be answered only by time. Mr. Barrett is getting the machinery and plant ready to commence sinking the Fairplay Iron Mine. This mine is in a good position, and we have no doubt when the mine measures are reached that it will be very remunerative. This gentleman is very enterprising, and we trust success will crown his efforts. We notice that the Alexandra Colliery is to be offered for sale by public auction, at the Severn Bank Hotel, on Feb. 24, by order of the mortgagee. This colliery, in area, is about 810 acres, in the lower measures of the district, and comprises the Brazzilly, Yorkley, Whittington, and Upper and Lower Trenchard veins, of an aggregate thickness of 16 feet. It is said that the value of this property will be enhanced by the successful winning of the New Bowson Pits, but we think, under present circumstances, this can hardly be calculated on, as the latter company are not down to the coal; and after all their failures, and waste of money, it is by no means certain that they will be successful.

The iron trade of this district is in a flourishing condition, the usual number of furnaces being in blast. The Dean Forest Iron

Company, at Parkend, are the first in this district to introduce improvements in connection with smelting iron. The great expense this company has been at in putting up apparatus for taking the gases from the top of the furnaces to the boilers is a sufficient guarantee of the value and benefit to be derived from the alterations. In order to carry out this plan thoroughly, they have erected the largest and highest chimney stack in the Forest. This piece of architecture is just now finished, and besides being of vast utility, is a very great ornament to the works.

The Severn and Wye Railway Company are likely to meet with a good deal of opposition from the Great Western Railway Company, and it is even now a question whether the former will be able to sustain their position while their Bill is going through Sessions. The railway rates here are very heavy compared with other districts, a little competition, therefore, from another company must result in benefit to the neighbourhood, but what is actually required is another outlet from the Forest, and should this company gain their point we trust they will push their line on from Mirey Stock up the Lydbrook Valley to join the Ross and Hereford lines. This is a great desideratum, and the company should take the matter into their most serious consideration at an early date. We trust to be in a position shortly to point out other improvements which are necessary to be carried out by some enterprising company.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

FEB. 18.—The charm of variety cannot be truthfully imparted to accounts of the state of the Iron Trade in Staffordshire. There is a tolerably fair demand in the north of the county, but by no means an active one, whilst in South Staffordshire the trade is decidedly dull. A few works of high repute for quality are moderately well employed, as the Bloomfield, at Tipton, but the rest are not producing much, if any more, than half their full make. The tone of the meetings is, undoubtedly, flat; hope has been drawn out to such a length that it is becoming almost too weak to support the confidence of the most buoyant, yet the substantial grounds for expecting improvement no doubt continue, but the position of South Staffordshire puts it in the wake of the current. No doubt stocks were generally replenished last autumn, with the idea that an advance of price was not far off, and that not having been realised, buyers are rather shy.

The Hardware Trades of the district generally are dull. The Council of the Wolverhampton Chamber of Commerce, in their annual report, speak on the subject of the state of trade with caution, observing:—

"Your Council are happy to report that the state of trade during the last year has been steady, and if anything, gradually improving. The purchasing power of some of our best customers has been for a time diminished by the low prices of their wool, and the events of 1866 still leave their mark on all commerce. The harvest too—magnificent for wheat—was in other respects deficient, and the workmen in the iron trade had to submit to a reduction of wages, which for a short time they resisted. But in spite of these drawbacks, the continuance of peace, and the ceaseless industry of all classes engaged in trade, have enabled us to make a little slow, but we may hope, safe progress."

The same report treats with some elaboration the question of the Bankruptcy Laws, and the council do not anticipate very much from any efforts of the present Government to improve them. Mr. H. Walker, who was elected at the meeting, on Tuesday, as President for the ensuing year, gave a decided opinion against a bankruptcy law at all. He said that bankruptcy laws originated when imprisonment for debt was a principle, as a mode of alleviating the harsh operation of the power, and with its abrogation he is of opinion that the necessity for bankruptcy laws ceases, and that a debtor, freed from liability to imprisonment, should not be released from his obligations to pay his debts except by the consent of his creditors; who, Mr. Walker thought, would not be hard, as a general rule, but would release a man when they had got from him what they could. But "the general rule" is just what we cannot trust to. Take the thousands of cases where a man gets into debt, and falls into the hands of hard usurers, who pile on him loads of obligations, in return for slight contributions of assistance. These are the very people the common morality of mankind would like to relieve a man from, whilst they are, above all, the classes who would pursue and worry a debtor to desperation. The plan of making the grant of relief dependent on the verdict of a jury of mercantile men, who might exact conditions for the future, with the proviso that creditors could, on grounds being shown, demand of a bankrupt an account of after-acquired wealth, has never yet been adequately discussed. The grand fault into which we have fallen is that a bankrupt must be relieved of his debts, unless a reason can be shown why he should not, whereas the grant of such relief should be a boon only to be conferred on the bankrupt showing that his bankruptcy was attended with circumstances which entitled him to merciful consideration, and on his further making the most reasonable offer possible, with a view to meeting his obligations in whole or in part for the future.

The bodies of the four men who lost their lives by an explosion at the Woodshutts Colliery, at Talke, near Kidsgrove, on the 10th inst., have been discovered. One was found on Saturday, and the last on Sunday. An examination of the workings showed that the falling in of a large amount of earth, by choking up the roads and preventing the spread of the ignited gas, saved the lives of several men who had just come down the shaft. As to the cause of the accident, a piece of clay for sticking a candle in was found near the body of the deceased named Haines, and he had a piece of candle in his pocket. It was proved that, though the pit was worked on the system of having only lamps, the men often used candles, and that they lighted their pipes from their lamps! It would be far better to prohibit lamps than permit of their being used with such laxity. On the faith that naked flame is avoided, a mine is naturally worked with less anxiety as to perfect ventilation than if open lights are known to be employed, whilst frequent breaches of the rules involve all the same dangers as the constant use of the candles. In such cases the lamp is "a delusion, a mockery, and a snare." The enquiry as to the accident has been adjourned to Friday week. Six men were injured besides the four killed.

Mr. Thomas Hughes, engineer to Messrs. Cochrane, of Woodside, near Dudley, has employed an ingenious plan of a self-acting runner from the top of a shaft, from which water is raised by a barrel. The apparatus consists, in the first place, of a right-angled link placed upon the pit chain, and so arranged that it comes in contact with a lever holding a chain attached to the runner under the centre of the drum shaft. This lever is knee'd about 9 or 10 in. from the top. When the coil of chain has nearly filled the drum the link presses forward the lever 3 ft., and causes the runner to cover the shaft, ready to receive the barrel containing the water. When the link leaves the lever, which it does by the slightest motion of the wheel, the runner, with the barrel, inclines towards the basin, and the barrel is emptied. By means of chains attached to the lever, and a balance weight, the runner is then restored to its original position by the side of the shaft, and, the engine being reversed, the barrel descends. The apparatus works with the regularity of a clock. Many visitors, scientific and otherwise, have witnessed the operation.

The fireman at a colliery engine belonging to Mr. A. Kendrick, at the Whitehall Colliery, near West Bromwich, was killed on Jan. 26, by a boiler bursting. The accident was the subject of an enquiry before Mr. Hooper, coroner, on Tuesday, at which Mr. Baker, the Government Inspector of Mines, was present. Mr. E. B. Marten, chief engineer of the Midland Steam Boiler Insurance Company, had been requested by the coroner to report on the boiler, which he did. It was a Cornish boiler, but the flue had been taken out, and it was, when it burst, fired by a grate underneath it. The valve was weighted at 60 lbs., but it was said that it did not usually work beyond 45. It had been many times repaired, and Mr. Marten said "The cause of the explosion was simply that the boiler was so old, and had been so frequently repaired and patched that it was unable to bear the usual working pressure. It is too often supposed that patching a boiler restores it to its original strength, whereas this cannot be the case, however skilfully it is done, as the new metal is often of a different texture to the old plate surrounding it, and expands and contracts in a different degree, causing strain upon the old work, and generally reducing the total strength of the boiler. The safety-valve was needlessly overloaded, so that it would not have relieved the boiler until the steam had risen much beyond the usual working pressure. And as the gauge was some distance from the boiler, and could show only the varying pressure in the main steam-pipes, the pressure may have been higher than usual at the time of the explosion, but such was the condition of the boiler that it is not necessary to suppose much beyond the usual working pressure to cause the explosion." These are dangers which a practised inspector would be the very person to point out, yet the boiler was *not* insured, and not subject to any special inspection. The jury said no blame attached to anyone, but they "requested Mr. Hooper to communicate with the Home Secretary, to recommend that a Government Inspector should be appointed to inspect boilers throughout England." Had the owner chosen to pay a trifle annually a competent inspector was available, without Government finding one; and those who wish to avoid the extension of Government Inspection have cause to complain of proprietors who grudge the cost of the Inspector of the Boiler Association.

Some interesting relics of mining industry in the Black Country have just been brought to light, and may now be seen in the Geological Museum at Dudley. By the favour of Mr. H. Johnson, I had an opportunity on Wednesday of inspecting these industrial antiquities. The most important of them is a primitive "sledge skip," which was found 20 yards below the surface, in some ancient yard coal working in the neighbourhood of Cannock. The title deeds of the estate show that these mines were worked 260 years ago, and the skip is, therefore, one of the earliest kind used in this district. It is made exclusively of oak, not so much as a nail in the shape of iron being used in its construction. In dimensions it is nearly a yard square, having on each side five perpendicular round bars. In front is a stronger upright bar, used no doubt for dragging the skip along. The bottom is composed of four rough planks, about 6 in. wide. There is no bow to it, as to those in use a century ago. The sledges or "slipes," made of stout oak, are somewhat like skates in shape, and appear to have been much worn. These sledge skips were used in Staffordshire until the introduction of rails, but those of later manufacture were made in part of iron. The sledge skip was contemporary with the wicker skips used in the North of England. Mr. Johnson tells me that nothing like this in point of antiquity has yet been unearthed in the Black Country. With the skip were found a three-handle quart cup of black porcelain—doubtless used by the miners of that day—and a couple of tobacco pipes. The latter are of a greyish colour, and the bowl is more egg-shaped than those now in use.—*Birmingham Daily Post.*

REPORT FROM MONMOUTH AND SOUTH WALES.

FEB. 18.—The Iron Trade of this district is characterised with something like vitality at the leading iron-making establishments, and makers are steadily receiving orders, chiefly for New York and British America. Although the heavy gales have prevented so large a quantity of rails being sent away as anticipated, yet employment is pretty regular at the mills, makers of late having secured some large orders, which, with those expected to come to hand, will afford full employment to the hands engaged for some time to come. Business generally is reported as being in a healthy state, and as no retrograde movement has taken place to check the improvement inaugurated with the new year, there is a fair prospect of the hopes then entertained of the trade gradually attaining a position something like its former activity being realised as the spring season advances. The time for re-opening the Northern ports is rapidly approaching, and in the course of a fortnight or three weeks the shipment of rails will be commenced for the Muscovite empire, from which an increase of orders is confidently looked forward to. Advices from India raise expectations of a speedy improvement in transactions with that part of the British empire, all fears of a failure in the crops having been dispelled by the accustomed fall of rain, and a speedy return to something like former activity in transactions is now looked forward to. A large order from Oude is now in hand at one of the leading establishments, and other contracts are shortly expected to be entered into. From the continental markets there is a fair enquiry, and as there is every prospect of peace being maintained, it will tend to add increased firmness to the speculative feeling springing up. Stocks in the hands of New York buyers are said to have become considerably reduced of late, and this is, to some extent, corroborated by the steady influx of orders from that quarter. Last month the total shipments of rails from the local ports to New York amounted to 5658 tons, which would, no doubt, have been considerably larger had not vessels been prevented from arriving at and leaving the places of shipment by the unfavourable state of the weather. Should the wind settle in a favourable quarter in the course of a few days, the clearances of railway iron will be considerable, as large quantities are now awaiting shipment, and several vessels are wanted to convey rails to New York, South America, British America, and to some parts of the south-west coast of America. The home trade is gradually recovering from its state of inactivity, and as stocks are known to be everywhere low, the general opinion is that an advance in prices will shortly take place. Orders come slowly to hand for plates, and there is no prospect of an immediate improvement. The quantity of pig-iron purchased during the last few days has been rather below the average, but prices continue firm. Tin-plates sell freely, and as additional orders are shortly expected there is every prospect of the late advance in prices being firmly adhered to.

Large quantities of steam coal have been shipped during the past week, principally for the mail packet stations and South American ports, and as stocks at the mail packet companies' depôts have become considerably reduced, the demand for some little time to come will, probably, be greater than it has been since the termination of the Abyssinian war. Transactions with French houses have somewhat decreased, and no improvement is expected in the demand until stocks in buyers' hands have become reduced. By far the largest quantities are being shipped by ironmasters, and coal proprietors, owing to the keen competition, have reduced the output on their collieries, and workmen are not working more than half time; and this unsatisfactory state of things will continue unless the men will accept the same rate of wages as paid by the ironmasters. The mildness of the season prevents the necessity for a large consumption of house coals, the demand for which is below the average.

An explosion lately took place at the Cwmsychan Pits, and on Wednesday and Thursday inquests were held by Mr. E. D. Batt, Coroner, at Abersychan, touching the death of John Prosser, and William Henry Weekes, aged 13, who died in consequence of injuries sustained by the explosion. A number of witnesses were examined, among whom were Mr. Joseph Green, colliery agent, and Mr. Brough, the Government Inspector, who said he had examined the state of the pit (Cwmsychan) in which two persons had lost their lives by an explosion of gas. The pit was worked by the Ebbw Vale Company, and he found it perfectly well ventilated; to his knowledge it had been so for many years, but, by the wrongful act of some person or persons, a canvass door was left open sufficiently long to bring about an accumulation of fire-damp, which, by the act of the haulier going in with the horse and tram with a light in his cap, took fire, and so led to the unfortunate accident. He was sure that every precaution was taken in that joint by the overlooker and manager to secure safety to human life. He never saw a pit better ventilated. No accident could have occurred except by neglect of the special rules laid down. By Rule 25 it was ordered that "Every person passing through a door must not prop it open, but close it carefully." Rule 27 says, "No person shall leave a lighted candle or other light in any part of the mine when leaving his work, nor use powder in a careless manner, nor without permission to use it. No person shall injure any air-course, brattice, caution mark, door, stopping, nor put coals, rubbish, or any other obstruction in any air-course; nor do any other act whereby the lives of the workmen or the security of the mine may be endangered. Every person discovering any doors standing open which ought to be shut, any derangement of the ventilation, or injury to doors, stoppings, or brattices, finding any appearance of choke-damp, gas, or water, or seeing any danger in the roof of roads or headings, shall at once give notice to the gaffer, or foreman, in order that the same may be remedied." Mr. Brough said he could suggest nothing to prevent such accidents. If men would not take care of their own lives they were only themselves to blame. Had there been any insufficiency of ventilation, or anything wrong in the pit, he should have given evidence that might have led to a verdict of manslaughter against the managing proprietor or Mr. Green, but he had no such evidence to give. The Coroner remarked that in this case the rules had been neglected. It was the place of Prosser, the deceased, to give notice, and if he had not paid the last penalty for his crime it would have been his (the Coroner's) duty to have committed him for trial. Mr. Brough, in answer to a juror, said springs could not be applied to all brattice doors. Every ingenious method had been tried, but constant puckering was going on, which rendered it impossible. Much must be left to the common sense of the men themselves. It would be useless now to proceed against Prosser for manslaughter, for God had punished him; but he would feel it his duty to prosecute one man before the district magistrates. The jury found a verdict in Prosser's case to the effect that "His death was caused by his own act, in permitting the canvass door to remain open, contrary to the rules of the colliery. In Weekes's case, the verdict was to the effect that he died in consequence of the injuries sustained in the explosion. It is believed the door was open for the space of two hours. Mr. Brough asked the age of the boy Weekes, and was told it was 13; he said he should require a certificate, and if the boy was not over 12 Mr. Green would be fined in the sum of 20*l.*

At the Monmouthshire Wagon Company's half-yearly meeting, on Wednesday (Mr. Crawshay Bailey in the chair), the financial position was said to be very satisfactory, and a dividend at the rate of 8 per cent. per annum was unanimously declared.

A petition has been filed for a compulsory winding-up of Shackleford, Ford, and Co. (Limited), who have works for the manufacture of rolling-stock, at Cheltenham and Swansea, and will be heard next week before the Master of the Rolls, when the history of the company, and the position of its affairs will be fully disclosed. The petitioner is a clergyman, but it is said a large majority of the shareholders are opposed to the application.

The arrivals at Swansea include—the Robert Bright, from Carrizal, with 350 tons of copper regulus, for Richardson and Co.; the Apollo, from Almeria, with 192 tons of Esparto grass, and 168 tons of copper ore, for A. Bell; the Coroner, from Coquimbo, with 360 tons of copper regulus, and 150 tons of copper, in bars, for H. Bath and Son, and C. Lambert; the Theophile Felix, from Santander, with 160 tons of zinc ore, for Zinc Ore Co.; the Michael Angelo, from Almeria, with 144 tons of Esparto grass, for A. M. Bell; the Countess of Bective, from Cuba, with 542 tons of copper ore, for Richardson and Co.

REPORT FROM SCOTLAND.

FEB. 17.—At the end of last week pig-iron warrants were in demand to meet engagements which had matured, and prices advanced; but this week holders are giving out some portion of what they held, and there is a consequent recession of prices, and not much business passing at the decline. Yesterday the market closed idle, at 55s. 1d. cash and 55s. 1½d. a month, only ¼d. being charged for the 30 days' interest. This is strange, *per se*, but not when it is known that speculation is ruling our market. Our shipments for the week are fully 1000 tons better than they were in the corresponding week last year, the figures being 9665 tons against 8650 tons, and the imports from Middlesborough have fallen in the year till date 3690 tons, features all in favour of the holders of warrants; there is, besides, an increase on the shipments from the Scotch ports of 7550 tons till date; but, perhaps, the re-lighting of outed furnaces has something to do with both the fall in price and the letting out of the warrants held for a rise. The market did not improve to-day, and only about 2000 tons reported at 55s. 1½d. cash and 55s. 3d. a month, closing buyers 1¼d. less. No. 1, g.m.b., 55s. 9d.; No. 3, 53s. 6d.; Gartsherrie, 62s. 6d.; Coltness, 61s. 6d.; Calder, 58s.; Summerlee, 57s. 6d.; Eglinton, 55s.; and Kinniel, 53s. 6d. Malleable Iron is, if anything, better in price, and makers, both here and in the Coatbridge districts, are well supplied with orders, angle iron and plates having been booked forward, and new engagements have been entered into this week at a reported advance of 2s. 6d. by one firm, but generally quotations range between 6*l.* 12s. 6d. to 7*l.* for bars, and angle and plates as in brand and quality. Considerable orders are in progress for Canada. The Kilsyth Iron Company, of which James Walker was the sole partner, is in the *Gazette*. Before commencing business at Kilsyth, Mr. Walker manufactured malleable iron at Port Dundas, Glasgow.

There is extreme dulness in the Coal Trade, and we are sorry to have to note another decline, shipping quotations being now as low as 5s. 3d. to 6s. 6d. per ton, f.o.b. here. Even these prices are merely nominal, as we have heard some masters say that they had first to enquire what buyers would give per ton, and accept it. As the Canadian traders commence to load about the end of this month, some slight improvement is expected, but then it will be but a "gleam," and nothing more. The shipments are a full average—21,875 tons having been sent foreign and coastwise this week, against 21,530 tons in the same week of 1868. Notwithstanding these facts, colliers are continuing to strike, because they are being reduced to 4s. per day. The recent severe storms, and continued and heavy fall of rains, have been the means of flooding burns and rivers in the Upper Ward, and have caused the drowning out of Mr. Brand's No. 1 Greenhead Pit, near the village of Cambusnethan, in Wishaw district. The Coltness Iron Company's pit, No. 3, escaped. Mr. Brand will still be able to supply his customers from his No. 2 pit, which was unharmed.

Another attempt is being made to re-organise a School of Mines in Glasgow, and this time it is under the auspices of the Glasgow Philosophical Society. Such a school, if patronised by the underground and other managers, and by the more intelligent miners, would do much to elevate them as a class, provide against any reckless accidents, and give a scientific air to their pursuits. One or two miners out of the large pits would communicate the result of their studies to the most intelligent around them, and these, again, might be so attracted as to become students themselves, and thus the utility of the School would spread. The coal (Parrot) and ironstone in the land of Muirside, Overton, Perthshire, containing 437 acres, are to let.

The latest reports from the Sutherland "diggings" state that the search for the precious metal continues, and that a fair day's wage is being picked up by most of the diggers. The aggregate quantity is not certainly large, but sufficient to make Helmsdale quite a busy place on Saturday night, when the workers return to dispose of their gold, and make necessary purchases for the ensuing week. Samples of the gold shown look as fine as Australian or New Zealand produce.

There have been two or three additions made to the contracts for Clyde-built steamers this week, and the trade is busy. The launches include—1. A large handsome screw steamship, named Leipzig, for the North German Lloyd's of Bremen, measuring 290 feet in length, 39 feet in breadth, and 30 feet in depth; of 2200 tons burden, and 350-horse power. She is intended for the company's Bremen and Baltimore service.—2. An iron sailing barque (Antonia), of 700 tons, A A 1 at Lloyd's, and 20 years in Liverpool registry. The Antonia is for French account, and is to be employed in the Valparaiso and West Coast trade.—3. A handsome sailing vessel, of 750 tons register, for Messrs. Henry Whittle and Co., of Liverpool, built for the San Francisco trade.—4. A very handsome iron clipper barque, of about 600 tons burden, classed double A at Lloyd's. She is intended to trade from London to Cape Colony, and to go into such rivers as the Cowie, and is fitted with all the latest improvements.

At the Geological Society of Glasgow meeting, Mr. Thomson exhibited a large suite of fish and reptilian remains from the blackband ironstone of Quarter, near Hamilton, of which the President gave a detailed account, and expressed a desire that they might be accurately figured and described in the publications of the society. Mr. Hugh M'Phail, of Nitshill, also read a paper on "The Carboniferous Sections of the Levern Valley," illustrated by a cross section from Waukmill Glen to Crookston Hill, representing the succession of the beds from the Hurlet and Nitshill main coal series upwards, but there was nothing of special interest in the paper to note.

The Royal School of Mines, Jermyn Street.

MR. WARINGTON SMYTH'S LECTURES.

[FROM NOTES BY OUR OWN REPORTER.]

LECTURE XXIX.—We come to-day (said MR. SMYTH) to a consideration of the security of shafts more or less vertical, called in the German "schacht," and in French "puits;" and first, as regards their position; next as to their form; then whether they are to be perpendicular or inclined; and, lastly, how they are to be secured, whether by timber or masonry. Wherever a distinct plan of the operations can be arranged beforehand, the placing of the shaft ought to depend on certain principles, as to which there can be little question if there be proper data; but whether in working stratified deposits or metalliferous veins, the placing of the shaft is one requiring a great amount of judgment and foresight on the part of the managers. There is no part of mining on which more will depend than on the position and nature of the shaft put down. The sinking itself, if upon a stratified deposit, is a matter of simple calculation and convenience. If a certain area is to be drawn from the manner in which the mineral shall be brought from any part of that area to a central point, and then how it is to be raised to the surface, are the principal points for consideration. One of the first things the mining engineer has to look to is the general dip and direction of the beds; the arrangement of the mine as regards probable or known faults, and the line of outcrop; and supposing a certain amount of sale can be made, some of the shafts will naturally be placed for the mineral to be raised most conveniently to supply that sale. If the area to be worked be several miles square, it would be absurd to take the deeper portions, if the shallower beds all through the district are of good quality, but in such cases much will depend upon the nature and quality of the coal, and the facility of disposing of it; and it may be useful to sink at once at two places rather than one. In either case, however, care must be taken that the shaft is placed so as to effect the drainage of a sufficient area. If the miners take an isolated bed, at no great depth, with the dip from north to south, it will be obvious that the best position for the shaft will be the extremity of the dip of the measure; but if they are dealing with beds of great depths, that might incur vast expense, such as an individual or even a company naturally would shrink from, they must place the shaft on some intermediate spot, from which the seam can be worked at a less depth. The removal of the coal underground to the shaft is also another point to consider, and for this purpose it is obvious that it will be best to place the main shaft in the centre of the area to be worked. In a case of this kind a certain breadth of the seam must be left all round the outskirts of the area, so as to prevent the water from the surrounding districts getting in, and thus impeding, if not preventing, future operations with a view to getting to lower seams; this, however, is often provided for by a clause in leases for other purposes. This may be effected either by sinking the shaft to a lower depth (which is the most common method), and cross-cutting, so as to intersect the seam at a lower point, and haul the mineral through that opening; or if the ground is not very watery the cross-cut may be driven in an inclined direction to the deeper drainage and ventilation. A third plan is, if the beds to be opened are not much saturated with water, to sink on to the bed itself, but this will not be possible if any water comes from the roof or ground; and it is not advisable, also, when there is much irregularity or many dislocations in the beds. The reason so much care and thought are requisite in the matter of shafts is the great expense of sinking them. An ordinary shaft, in commonly fair ground, and not more than a few hundred feet deep, will cost from 5000*l.* to 10,000*l.*; and if they go to greater depths the figures will come up to 40,000*l.* or 50,000*l.*, and cases may be quoted where the cost has been greater than that. There are two or three sinkings in the North of England in which the shafts, with the requisite machinery, has not cost less than from 100,000*l.* to 150,000*l.* In the same way, in metalliferous mines, where the rocks to be cut through are of extreme hardness, such as granite and killas, the cost of a moderately deep shaft will be from 15,000*l.* to 25,000*l.* It is, therefore, a most serious consideration, as if the start should be made in the wrong place, and these great depths have to be reached, it cannot be expected that the capital embarked could hold out against such heavy expenses, or the courage of a company to be equal to such an expenditure in the face of so much uncertainty of success in the end. In metalliferous mines the question whether the shaft shall be perpendicular or inclined in a greater or less degree frequently occurs—that is, whether it should start from the surface with a view of cutting the vein at a lower point, or follow the mass of the vein itself from the outcrop. The fashion of a district often goes a long way in determining this question, and so in Hungary perpendicular shafts are more common, while in Cornwall inclined shafts are generally used. As I have already stated, in metalliferous mining the shaft itself is often exploratory, and every fathom is carefully examined and tested as they go down. A case occurred last year in which a company was got together to open a lode at a depth of 40 fms., but there were circumstances which led me to have misgivings whether the company would hold out till they cut the lode. The shaft was commenced, and a large wheel was put up, but at 20 fms. the heart and purse of the adventurers both parted, and the attempt was entirely abandoned before they saw the lode. Circumstances of this kind have no doubt led to the conclusion that it is better to sink on the lode itself, and so at every foot there will be a chance of taking out something to pay expenses; and, perhaps, at no great depth they may find indications which may justify them driving out both ways to explore, a plan which it is suggested is always the best if there is a long purse at command. At the same time, when the dip and direction of the lode are known, and the appearances are good, it is better to sink a perpendicular shaft to a deeper part of the lode, and thus the mineral is raised to the surface by a shorter route than if the shaft was on the lode. Much, however, of this is a matter for calculation and comparison; and the lecturer, by means of drawings on the board, and references to a large plan of the Tresaveau shafts and workings, illustrated these and other points. It is true that in working some

seams of coal—such as one occurring in the neighbourhood of Swansea, where the bed is elevated at a very considerable angle—it is an open question whether they may not advantageously sink in the coal itself, and work a colliery on a considerable scale, without the necessity of perpendicular shafts; still these inclines are open to an objection, on account of the very great wear and tear of the wagons and drawing gear, as compared with the drawing of the mineral perpendicularly, besides which there is the difficulty of keeping the shafts open. In collieries, therefore, the shafts are ordinarily perpendicular; but with metalliferous mines the case is very different. Supposing you were to sink perpendicularly to a metalliferous vein, you must either sink on the hanging-wall side until you intersect the vein, or on the footwall side, and then drive crosscuts through dead ground to intersect the lode, in either of which cases considerable expenditure and loss of time have to be incurred before you see anything at all of the lode. It is surprising how some miners, especially in Ireland, preferred to sink on the footwall side of the lode, as it is obvious that if the lode dipped away at a considerable angle, by putting a shaft on the footwall side the further they went down the further they will be from the lode, and the greater distance will they have to cross-cut to get at it, whereas by sinking on the hanging-wall side they would intersect the lode. Another class of shafts frequently employed in metalliferous mines are the inclined shafts sunk between the walls of the lode, and which are generally oblique, not merely in the sense of deviating from the perpendicular, but oblique as regards the longitudinal section of the lode. The shafts at the Tresavean Mine (which, after yielding many thousands of pounds profit, is now standing full of water) were put down perpendicularly in an admirable manner, through extremely strong ground, so that if the price of copper should ever rise sufficiently, the water might be pumped out, and the work resumed, as at the time the mine was abandoned the lode was 4 feet in width, and a good deal of copper ore was taken out, but it was too poor to work at such a great depth at present prices. If this should be done the shaft would probably be found to be perfect; while in the case of an inclined shaft so much timber is required to support the upper side that in all probability, after the lapse of a much shorter time, it would be found to have fallen in. Although inclined shafts are very often, indeed, the best mode of attacking metalliferous deposits, the preference, where feasible, must be given to perpendicular sinkings, as they are much more convenient for pumping and other machinery, and more economical as regards the wear and tear of the apparatus. These are a few out of many other considerations which affect the question of the placing and direction of shafts.

With regard to shape, it will be found in colliery districts that shafts are all either round or elliptical; while in metalliferous mines they are almost invariably rectangular. Exceptions to this rule may be said to be almost geographical, as in one part of the South Wales coal district the shafts follow the rule of the metalliferous mines around, and are rectangular. On the Continent the shape is usually polygonal, ranging from 10 to 20 sides, 16 being the most common. In Russia the shafts are four-sided, but slightly arched. In Mexico there are many fine specimens of eight-sided shafts. As to their dimensions, nothing definite can be said. In Somersetshire some old shafts are found not more than 4 or 5 feet in diameter, but at present it is seldom they are made of less than 6 or 7 ft. diameter, whilst if they are intended to do a considerable amount of work they are generally as much as 12 ft. [The lecturer here drew attention to a diagram showing a section of the strata passed through in the remarkably deep sinking at Shire Oaks Colliery, near Worksop, carried out by the late Duke of Newcastle, and which has attained a depth of more than 500 yards, to illustrate the great variation in the character of the ground, and also the difficult questions which arose when sinking a certain portion of it, not merely as regards the hardness of the rock, but as to the quantity of water that made its way into the shaft.] This is one of the finest shafts in all England for excellence of work, and the interest which arose from the difficulties of the sinking. It is of considerable size, 16 ft. in the clear. Some shafts are to be met with in South Wales and in the North of England as much as 22 ft. in diameter. In Belgium, where the mines are much deeper than any in England, the shafts, which are polygonal in form, are admirable specimens of work. In metalliferous mines it is usual to construct the shafts for ordinary winding purposes, 6 ft. by 5 ft., whilst the engine-shaft, where more room is required for the pumping-rods and placing of the ladders, &c., are generally about 9 ft. by 6 ft., and sometimes 10 or 12 ft. by 6 ft., especially if the shaft is intended to serve several purposes. Exceptionally large shafts are met with in the Hartz and Hungarian mines, where they are frequently 18 ft. in diameter, and in parts of Mexico and Brazil some of the shafts are of enormous width, often being no less than 30 ft. across.

GEOLOGICAL SOCIETY OF LONDON.

Feb. 10.—Prof. T. H. HUXLEY, LL.D., F.R.S. (President), in the chair.

Moreshwar A'tmárám Tackhadakar, St. George's-terrace, Primrose-hill, N.W. and Henry Spicer, jun., Esq., Highbury-crescent, N., were elected Fellows.

The following papers were read:—

1.—"On the Evidence of a Ridge of Lower Carboniferous Rocks crossing the Plain of Cheshire beneath the Trias, and forming the boundary between the Permian Rocks of the Lancashire type on the North and those of the Salopian type on the South," by Edward Hull, M.A., F.R.S., F.G.S.

In this paper the author proposed to account for the dissimilarity of mineral and stratigraphical characters of the Permian formation of Lancashire and the North of England as compared with that of the Midland Counties and Shropshire, on the ground that they had originally been deposited in separate basins, divided off from each other by a ridge of Lower Carboniferous rocks, stretching from west to east, under the central plain of Cheshire.

The author showed that there was evidence of such a ridge on the east side of the plain of Cheshire, by the uprise of the Lower Carboniferous rocks to the north of Congleton Edge, in the Valley of the River Dane, and that the date of this uprise and the denudation of the Upper Carboniferous beds along the axis of elevation was clearly determined to be antecedent to the Permian period by the outlier of Permian rocks at Rushton Spencer.

On the west side of the plain there was evidence of a similar axis of upheaval to the south of the Flintshire coal field near Hope, where the Lower Carboniferous rocks (Yoredale and Millstone beds) are brought up to the surface at the margin of the New Red Sandstone.

Mr. Hull regarded the uprise on each side of the plain as referable to the same pre-Permian age, and as belonging to the east and west system of flexures into which the Carboniferous rocks were thrown at the close of the Carboniferous period over the North of England. Such an axis had its antetype in the concealed ridge which once occupied the valley of the Severn, and divided the Devonian rocks of Devonshire from those of South Wales; and the author suggested that a similar ridge, now concealed beneath the Triassic formation of Cheshire, offered the only satisfactory explanation of the dissimilarity in the two types of Permian beds—that of Lancashire, and that of Shropshire and the Midland Counties.

Prof. RAMSAY considered that the lithological differences in the Permian rocks of the two areas referred to were hardly so great as was supposed by Mr. Hull.—Mr. PRESTWICH remarked that the nearly equal thickness of the Permian deposits in the two areas was in favour of their having been deposited in continuity.

Mr. W. W. SMYTH considered that the difference between the Permian beds in question was not so great as the author supposed, but that the undoubted existence south-west of Chester of a breadth of five or six miles of Bunter Sandstone, lying immediately upon the Millstone Grit, although observed only at one point, was strongly in favour of the author's hypothesis.

Mr. HULL stated, in reply, that the difference between the two groups of Permian rocks to which he had referred was such as to cause their identity to appear at first sight very doubtful. The extent of the anticlinal at Rushton Spencer is so great that it must be inferred to have extended far both to the east and west.

2.—"On the Red Chalk of Hunstanton," by the Rev. T. Wiltshire," M.A., &c.

On Wednesday the following papers will be read:—1. "On the British Post-glacial Mammalia," by W. Boyd Dawkins, M.A., F.R.S., F.G.S.—2. "On the Origin of the Northampton Sands," by J. W. Judd, F.G.S.—3. "On the Cretaceous Strata of England, France, and Algeria," by M. H. Coquand: communicated by J. W. Flower, F.G.S.

GEOLOGICAL SOCIETY.—At the annual meeting, for election of officers, yesterday, Prof. Huxley was re-elected President; Sir P. de M. G. Egerton and Prof. Warington Smyth were elected vice-presidents, in the room of Prof. Ramsey and the Earl of Selkirk. The persons not re-elected to the council were—the Duke of Argyll, R. Etheridge, Sir H. James, R. W. Mylne, and Prof. Ramsay; those elected in their stead being—J. W. Flower, Godwin-Austen, Dr. Hall, J. C. Moore, and Joseph Prestwich. The secretaries and the treasurer were re-elected. A large number of the members dined together at Willis's Rooms, St. James's, in the evening.

BOSCASWELL MINE.—Instances of heavy losses being avoided by continued energy, even in the face of unfavourable prospects, have frequently been recorded in the *Mining Journal*, and another striking example is now presented by the change which has recently taken place at Boscasswell Mine, North St. Just. At the beginning of last year serious thoughts were entertained of suspending operations altogether, but as it was considered that such a step would lead to great hardships among the working population, it was ultimately determined to reconstruct the company so as to enable those who had still confidence in the enterprise to carry on the mine. The result has been most satisfactory, and the last months' sale has far exceeded any since the concern was transferred to the present company. The sales have been—January, 7½ tons of tin of the value of 335*l.* 14*s.*; February, 5 tons=214*l.* 14*s.* 7*d.*; April, 6¾ tons, 362*l.* 8*s.* 11*d.*; May, 7 tons, 373*l.* 13*s.* 6*d.*; June, 7½ tons, 387*l.* 12*s.* 6*d.*; July, 6 tons, 316*l.* 7*s.* 9*d.*; August, 5½ tons, 277*l.* 2*s.* 9*d.*; September, 7¾ tons, 385*l.* 16*s.*; October, 6 tons, 340*l.* 4*s.* 3*d.*; November, 7 tons, 389*l.* 13*s.* 3*d.*; December, 6½ tons, 377*l.* 15*s.* 10*d.*; and January, 10 tons, 626*l.* 5*s.* 1*d.* It appears that one-half of the mine is held by Mr. E. S. Boyns, of Penzance, the whole of the mine being in very few hands, and the mine is now being worked with the greatest energy, every hope being entertained that Boscaswell will make a third division of profits to the spirited adventurers.

THE PHŒNIX MINE.—A cause of some interest was heard a few days since, before the Vice-Warden of the Stannaries Court. The plaintiffs, as the joint pursers of the above mine, filed a petition to recover arrears of call. The defence was that the call (made on March 3, 1868) was not properly made, and therefore invalid. It appeared that by one of the rules of the company the adventurers were empowered to appoint from time to time a committee, to consist of not more than three shareholders (two of whom to be a quorum), to superintend and direct the management of the mine in the intervals between general meetings, and a committee was subsequently appointed, consisting of two shareholders, who subsequently were adjudged bankrupts. By another rule general meetings were to be convened by the committee, or by the pursers on instruction from the committee, either upon the mine or at some other convenient place; and by another rule the accounts were to be audited and examined in the usual way at meetings when calls were to be made. On behalf of the defendants, it was argued that the call had not been made in accordance with these rules, and especially that the notice for the special general meeting of March 3, issued on instructions from only one member of the committee, was not a compliance with the rule. The Vice-Warden held that the call was properly made, and gave judgment for plaintiffs.

THE MINING JOURNAL.—Now ready, neatly bound, price 1*l.* 10*s.*, Vol. XXXVIII., for the year 1868. To be had from any newsagent or bookseller, or at the MINING JOURNAL Office, No. 26, Fleet-street.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Devon.

IN the MATTER of the COMPANIES ACT, 1862, and of the EAST BROOKWOOD MINING COMPANY.—By an Order made by His Honour the Vice-Warden of the Stannaries in the above matter, dated this 18th day of February instant, on the petition of John Bayly, of Plymouth, within the Stannaries of Devon, a creditor of the said company, IT WAS ORDERED that the said EAST BROOKWOOD MINING COMPANY should be WOUND-UP by this Court under the provisions of the Companies Act, 1862.

SAMUEL CATER, Plymouth, Devon
(Solicitor for the Petitioner).
F. HEARLE COCK, Truro, Cornwall.

Dated Truro, 18th February, 1869.

In the Court of the Vice-Warden of the Stannaries.
Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WENDRON CONSOLS MINING COMPANY.—ALL CREDITORS or CLAIMANTS of the ABOVE-NAMED COMPANY, who have not received notice from the Registrar of the said Court, that their claims have been already admitted, are hereby REQUIRED to COME IN and PROVE THEIR SEVERAL DEBTS or CLAIMS at the Registrar's Office, Truro, on Friday, the 26th day of February instant, at Eleven o'clock in the forenoon, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such proof. And for the purpose of such proof they are either to attend in person or by their solicitors or competent agents, or (unless such attendance be required by the Registrar's summons) they are to send affidavits of their several debts or claims to the Registrar of the Court, at Truro, such affidavits being sworn either before some Commissioner of the said Court, or before any Court, Judge, Justice, or any Commissioner of one of the Superior Courts lawfully authorised to take and receive affidavits and affirmations.

WM. MICHELL, Registrar of the above-named Court, Truro, Cornwall.

Dated Registrar's Office, Truro, February 17th, 1869.

IMPORTANT MINING PROPERTY, WITH BUILDINGS AND MACHINERY IN IRELAND.

THE CARYSFORT MINING COMPANY (LIMITED), IN LIQUIDATION.

MESSRS. EDWIN FOX AND BOUSFIELD WILL SELL, BY AUCTION, at the Mart, Tokenhouse-yard, Bank of England, on Wednesday, March 3, at One o'clock precisely,

THE CARYSFORT COPPER, SULPHUR, IRON, LEAD, AND SILVER-LEAD ORE MINES,

Situate in the county of WICKLOW, in IRELAND, near the towns of Arklow, Ovoca, and Newbridge, with the Dublin, Wicklow, and Wexford and Shillelagh Branch Railways passing through the lands; together with the agents' houses and workshops, pitman's house, lead house, powder house, stabling, &c., capital MACHINERY, including WATER WHEEL, 25 ft., 4 ft. breast pumps, drawing gear, ore crusher, dressing floors, sluice pit, small water wheel, steam engine and engine house, shaft timbering, and the entire PLANT necessary for continuing the working of the mines—all in good repair.

The sett (which is held under lease, dated 6th February, 1858, from the Earl of Carysfort, for a term of 31 years from 29th September then last, at a royalty rent of 1-15th) comprises about 16,500 acres, and extends from east to west about 3¼ miles, and is bounded on the north by the Aughrim River, on the south by the Arklow coast, on the east by the Arklow River, and on the west by the border line of the county of Wexford.

The following shafts have been sunk in these mines:—Ballintemple Lead Mine, 56 fathoms, and 6 levels; Ballinvalley Sulphur Mine, 28 fathoms; Ballincillogue, 25 fathoms; Moneytegue, 25 fachoms; Ballycogue (two shafts), 8 and 24 fms.; Coolahullin, 11 fathoms; Arklow (two shafts), 10 and 12 fathoms, and numerous smaller trials.

From these the following ores have been raised:—Gold-bearing quartz, silver, lead, copper, sulphur, and iron; also, amber and china-clay, and slates, and upwards of 270 tons of lead ore; and a large quantity of the gold and other ores have been sold by the company. The buildings are in good repair, and the machinery in working order. The buyer can proceed at once with the working, which is at present carried on by the liquidators.

Printed particulars, now ready, may be had of Messrs. D. and T. FITZGERALD, solicitors for the liquidators, 20, St. Andrew-street, Dublin; WILLIAM G. CRAIG, Esq., liquidator, Trinity Chambers, Dublin; Messrs. ROGERSON and FORD, 40, Chancery-lane, London; or to Messrs. EDWIN FOX and BOUSFIELD, 24, Gresham-street, Bank, E.C., corner of Coleman-street, London.

SLATE QUARRIES, NORTH WALES.
TO CAPITALISTS.

MESSRS. BARNARD, THOMAS, AND CO. have been instructed by the Executors of the Mortgagee under powers of sale, to SELL, BY AUCTION, at the Clarence Hotel, Manchester, on Tuesday, the 9th day of March, at Three o'clock in the afternoon, in One Lot, and subject to such conditions as will be then and there produced (unless previously disposed of by private contract, of which due notice will be given), the valuable LEASE, PLANT, and MACHINERY of the

WRYSGAN SLATE AND SLAB QUARRIES,

Situate in the well-known FESTINIOG RANGE, and in close proximity to the most successful slate quarries in North Wales.

This property contains about 400 acres, through which the blue vein runs for more than a mile in length and about 50 yards in breadth, and is held under lease for a term of 90 years from the 1st January, 1854, at a dead rent of £100 and no royalty, and to a payment of £50 for way leave over land belonging to Mrs. Gore.

A well-arranged siding and incline have recently been made at an expense of £5000, connecting the quarry with the railway from Festiniog to Port Madoc, the place of shipment, the cost of conveyance being only 3s. per ton.

There are TWO powerful WATER-WHEELS, a STEAM ENGINE, several SLATE TABLES, and other machinery; and the quality of the slates is equal to that of the best in the district.

Further particulars may be had on application to Messrs. HIGSON, Mining Engineers, 94, Cross-street, Manchester; Messrs. HONEY and HUMPHREYS, Accountants, Ironmonger-lane, London; Messrs. BARNARD, THOMAS, and Co., Albion Chambers, Bristol; or to Messrs. J. and H. LIVETT, Solicitors, Albion Chambers, Bristol.—Bristol, Feb. 12, 1869.

VERY VALUABLE LEASEHOLD COLLIERIES, ABERDARE, GLAMORGANSHIRE.

MESSRS. FULLER, HORSEY, SON, AND CO. are instructed to SELL, BY AUCTION, at the Mart, Tokenhouse-yard, London, E.C., on Wednesday, March 24, at Two o'clock precisely, the very valuable LEASEHOLD COLLIERIES and other MINERAL PROPERTIES of the

ABERDARE MERTHYR STEAM COAL COMPANY (LIMITED),

Situated at HIRWAIN COMMON, in the parish of ABERDARE, GLAMORGANSHIRE, about two and a half miles from the town of Aberdare, and in direct railway communication with the shipping ports of Swansea, Cardiff, and Newport.

The property comprises numerous SEAMS or VEINS of COAL of the thickness in the aggregate, of 32 ft. 7 in., together with IRONSTONE and FIRE-CLAY, extending under a tract of land of about 624 acres; and there are underlying the entire area NINE VEINS or SEAMS of COAL, known as the Driver Vein, the Upper Four Feet, the Six Feet, the Pit or Yard Vein, the Nine Feet, the Dirty Vein, the Little Vein, the Old Vein, and the Gellidog. The five first named have been worked in these collieries, and the remainder are known to exist, as the last named is worked at Cyfartha. The minerals include the well known "Upper Four Feet," being the celebrated seam of the Aberdare Steam Coal, and the other seams are well known and approved, and are won by levels or drifts, one of which cuts most of the seams; the other works the "Driver Vein" and Upper Four Feet; the roofs are good, the workings free from gas, and a drift has been formed from east to west along the entire range, which effectually drains all workings to a certain level without pumping.

The workings are equal to an out put of from 400 to 500 tons of coal daily, but the quantity at present raised does not exceed 300 tons daily, in consequence of the existing dulness of trade. The ironstone is won with the coal, and at the present rate of working 150 tons per month are raised. The quality is good, equal to from 33 to 35 per cent.

The collieries have been opened under careful supervision, and the whole of the plant and appliances are of the best order. The new drift is worked by two powerful horizontal steam-engines, with steel wire-ropes and winding gear, the trams are conveyed on a trolly or wagon down a new self-acting incline, having two lines of permanent rails, about 680 yards long, from the mouth of the pit to the sidings of the railway

The long range level is worked in a similar way.

The coals are passed through self-registering screens, of the most approved modern construction, into the railway trucks. The cost of the coals, including royalties and all mining charges, does not average more than 5s. 4d. per ton.

The buildings include steam-engine house, range of stone-built stables for 40 horses, saddlers' shop, hay and chaff store, offices for manager and clerks, carpenters' shop, two smiths' shops, small brick lodge, sheds over incline, drums and coal screens, weigh house, wheelwrights' shop, store room, ventilating shaft and furnace. There are two reservoirs on the side of the mountain, fed by natural springs, that afford a plentiful supply of good water for the purposes of the colliery.

The present company have expended upwards of £50,000 in the purchase and development of this property. The whole of the seams are now being worked at adjoining collieries, and have been thoroughly proved, and their character and value ascertained, by the present manager, who has also, from a recent survey, ascertained the exact quantity of unworked coal; indeed, the colliery may not inaptly be termed, as to most of the seams, a maiden colliery; and as the coal can be cheaply won, with ordinary management, a most remunerative purchase may be made by those seeking investment. Held under leases, which may be seen at the offices of the solicitors.

The works may be inspected on application to Mr. THOMAS DAVIES, the manager, at the works. Particulars, with plans and other information, may be obtained of Messrs. MINET and SMITH, Solicitors, 3, New Broad-street, London, E.C.; and of Messrs. FULLER, HORSEY, SON, and Co., Auctioneers, 11, Billiter-square, E.C.

Particulars and plans may also be had at the principal hotels at Cardiff, Newport, Swansea, Liverpool, and Manchester; and at the Auction Mart, London.

FOR SALE, cheap, a 16-horse power PORTABLE STEAM ENGINE, new, and with all recent improvements, guaranteed.
FIRST-CLASS PORTABLES, 5 to 25-horse power, on advantageous terms. Prize Medals awarded—Hamburg, 1863; Paris, 1867, &c.
FOR SALE, EIGHT very superior SECONDHAND PORTABLE STEAM ENGINES, 5 to 10-horse power, by eminent makers, in excellent condition.
BARROWS AND STEWART, ENGINEERS, BANBURY.

VALUABLE IRON WORKS FOR SALE.

MR. JOHN PARSONS has been favoured with instructions TO SELL, BY AUCTION, at the Royal Hotel, Cardiff, on Tuesday, the 9th day of March, 1869, at Twelve for One o'clock, in One Lot, or such lots as may be fixed at the time of sale, the VALUABLE IRON WORKS, ROLLING MILLS, &c., known as the

COLLEGE IRON WORKS,

Near CARDIFF, for some years carried on for the MANUFACTURE of SMALL RAILS AND MERCHANTS' BARS, and capable of being used for the MANUFACTURE of TIN BARS, for which there is at present a great and profitable demand in the immediate locality.

These iron works are situate three miles from Cardiff, stand on three acres of ground, and are most advantageously situated on the Glamorganshire Canal, thus communicating direct with Cardiff Docks, Aberdare, and Merthyr, and by which coals can be delivered at about 6s. 9d. per ton. Llandaff Station is within three quarters of a mile, whilst Walnut Tree Bridge Junction of the Rhymney and Taff Vale Railway is within three miles, thus having direct communication with both the broad and narrow gauge railway systems.

The PLANT and MACHINERY include PUDDLING and HEATING FURNACES, ROLLING MILLS, &c., with the usual appliances. A foreman's house, two cottages, and office are all included.

The tenure is leasehold, the chief portion being held for an unexpired term of 64 years, at a rental of £40, and the remainder for 32 years, at a rental of £12.

The works are in full working order, and may be viewed, and other particulars obtained, on application to Mr. E. DANIEL, Whitchurch, near the works; Mr. JOHN PRICE, Solicitor, 28, Clare-street, Bristol; or of the Auctioneer, Athenæum-chambers, Nicholas-street, Bristol.

MINING PLANT FOR SALE.

TO BE SOLD, BY PRIVATE CONTRACT, the whole or portions of the valuable PLANT and MACHINERY in and upon the

PENPOMPREN & PENYBANK UNITED SILVER-LEAD MINES,
TALYBONT, near ABERYSTWITH, CARDIGANSHIRE,

Comprising TWO WATER-WHEELS, nearly new (with iron segments), 40 feet diameter by 4 feet breast, and 12 feet diameter by 4½ feet breast respectively; upwards of 750 feet of LAUNDERS to ditto; CRUSHER, with 30 inch diameter rollers; double reversing improved WINDING MACHINE; 600 to 700 fathoms of WIRE ROPE, with pulleys and shieves to support ditto; 11 fathoms 9 inch PUMPS, 15 fathoms 6 inch ditto, 20 fathoms 5 inch ditto; 90 to 100 fathoms of iron PUMP RODS; electrical signalling apparatus, with 1500 yards of conducting wires; 400 to 500 yards of double-iron bridge tram RAILS; patent atmospheric American ORE STAMPS, with speed gearing for ditto; one ZENNER'S rotating BUDDLE, 18 feet diameter; two circular BUDDLES, with 9 ft. wheel to drive ditto; one OFFICE (of wood) 12 by 10 feet square; one ore bin, scales and weights, wooden sheds; six JIGGING HUTCHES; flat buddle, trunks, strakes, dolly tubs, catch pits, sieves, barrows, tools and utensils on dressing-floors, kibbles, tram wagons, balance and pendulum bobs, angle pulleys, crab winch, lifting screw, chains, tackle ropes, sundry lots of timber and ironwork, ladders and dividing boards in shafts, one horse and cart and two sets of harness, patent straw cutter and stable utensils, assayer's furnace and apparatus.

Together with all the other sundry MATERIALS and APPLIANCES necessary to the working of an extensive LEAD MINE, the whole plant being in good order, of recent construction, and of the most modern and approved workmanship.

Apply to Mr. EDWARD GLEDHILL, manager, at the mines, who will furnish all requisite information and particulars.

VALUABLE IRON ORE ROYALTY, IN CUMBERLAND, FOR SALE.

TO BE SOLD, BY PRIVATE TREATY, a VALUABLE and EXTENSIVE MINERAL GRANT of HEMATITE IRON ORE ROYALTY, situated at WATER BLEAN, in the parish of MILLOM, in the county of CUMBERLAND, and in the immediate neighbourhood of the great producing mines of Hodbarrow.

The mine is now in working, and can be inspected; considerable quantities of rich ore have been already sold at remunerative prices, and large quantities are now at the surface, but for want of efficient machinery sales have been retarded.

Satisfactory reasons can be given why this mine is offered for sale.

If wished, some of the present proprietory will join in the purchase, or the whole mine will be sold, with the lease, which has about 17 years unexpired.

The grant is extensive, and terms liberal.

Mr. E. DAWSON, the agent at the mine, will show the same, and further particulars may be obtained from Messrs. LUMB and HOWSON, Solicitors, Whitehaven, where a plan of the sett can be seen.

TO ENGINEERS, IRON FOUNDERS, AND SHIP BUILDERS.

TO BE SOLD, BY PRIVATE CONTRACT, the EXTENSIVE and COMMODIOUS ENGINE WORKS and FOUNDRIES, BOILER and SHIP BUILDING YARDS, at HAYLE, of SANDYS, VIVIAN, and Co., to whom apply for particulars.—Hayle, Feb. 3, 1869.

NORTH WALES—QUEEN'S FERRY, FLINT.
CLOSE TO THE RAILWAY.

TO BE SOLD OR LET, DESIRABLE FREEHOLD MANUFACTURING PREMISES, with ENGINE-POWER and LAND.—A plot of about one acre, with substantial factories, engine-house chimneys, stable, outbuildings, and sheds, suitable for any manufacturing purpose. ENGINE of most recent construction, and BOILER nearly new.

For further particulars, apply to JOHN TEMPLE, 32, Redcross-street, Liverpool

SITES FOR MANUFACTORIES AT SEAHAM HARBOUR.

TO BE LET, SITES FOR MANUFACTORIES AT SEAHAM HARBOUR.—Seaham Harbour offers every advantage to Manufacturers desirous to ESTABLISH WORKS. GLASS, IRON, CEMENT, CHEMICAL and PATENT FUEL WORKS have special facilities offered to them,—ground rents being low, and coals of the best quality, obtainable from pits adjacent to the town, at a moderate price.

There is excellent shipping accommodation at the docks, and sand, chalk, &c., are brought to the harbour as ballast by the shipping at nominal prices. Railway access to all parts of the United Kingdom.

Refuse and ballast can be tipped into the sea at no cost, and without liability to damages for pollution of rivers, and there is an unlimited supply of pure water from the limestone springs.

Applications for sites to be made to Mr. WILLIAM FORSTER, Londonderry Offices, Seaham Harbour.

W. H. LANYON,
(Late of Kennall Gunpowder Company)
GUNPOWDER MERCHANT,
TRURO.

IMPROVED APPLICATION OF WATER POWER.

THE TURBINE.

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NOTICE TO INVESTORS.

STATISTICS OF THE MINES OF CORNWALL AND DEVON

WITH OBSERVATIONS UPON THEM.
I beg to inform the public that my work, under the above title, for 1869, will be published early in January, and will contain the following particulars, viz.:—The geological position, present prospects, names of purser, manager, and secretary, with statement of the annual returns of each mine during the last ten years, and of dividends paid to the present time.
This work will show with completeness and explicitness a variety of particulars not afforded in any other publication, but which it is important, especially for investors, to know—such as depth of mine, hands employed, returns, length of time at work, &c.
Only a limited number of copies will be issued. THOMAS SPARGO.
Subscribers' names will be received at my office, 224 and 225, Gresham House, Old Broad-street, London, E.C., and at the office of the MINING JOURNAL.

Now in the Press.

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BY THOMAS SPARGO,
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From the very best quality of charcoal iron and steel wire.
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AS A PROOF OF THE SUPERIORITY OF THE THRASHING MACHINERY MANUFACTURED BY
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They beg to call attention to the following statement:—

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Engines and Machines sent out in the year 1868	812	644
Total Number sent out up to December 31st, 1868	8921	7982

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NOTE.—The Royal Agricultural Society will not hold another trial of Portable Steam Engines and Thrashing Machines until the year 1872.

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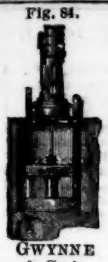
Fig. 86.

GWYNNE & CO.'S IMPROVED CHAIN-PUMP,
Worked direct by Steam-Engine.

These pumps work without valves or packing, and raise a considerable quantity of water. They will lift sand, mud, or grit without choking, and require only very inexpensive repairs.

Fig. 84.



GWYNNE & CO.'S DOUBLE-ACTING PUMPING-ENGINE.
As supplied to the Admiralty Graving Docks, Malta, to lift from 200 to 2000 gallons per minute. The engine is of inverted vertical cylinder construction. The pump barrel and piston are of gun-metal, and the whole very strong and compact.

Fig. 106.

GWYNNE & CO.'S IMPROVED PLUNGER HAND PUMP.
A very neat and extremely compact arrangement; will work for years without getting out of order. These pumps are peculiarly adapted for mines, for which great numbers have been supplied in situations where no other pump could be applied for want of space. They are equally adapted for use as feed-pumps, by driving them with strap from a rigger in place of the fly-wheel.

Fig. 139.

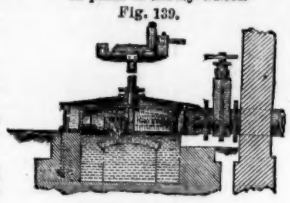


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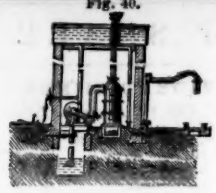
Fig. 40.



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As Applied to Railway Stations.
The vertical boiler supplies the engine with steam, the pump discharging the water lifted from the well into the tank above, whence it may be drawn as occasion requires, for feeding locomotives, washing the carriages, as a fire-engine, &c.
Estimates given.

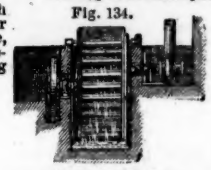
Fig. 142.

GWYNNE & CO.'S IMPROVED PORTABLE STEAM-ENGINE.
Light, simple in construction, durable, and economical, and very superior to "agricultural" engines. From 2½ to 30 horse power.

Fig. 43.

GWYNNE & CO.'S PATENTED WIND-POWER PUMPING MACHINERY.
Designed for Drainage and Irrigation Purposes
Suitable also for supplying the mansions of noblemen or gentlemen. Works continuously day and night without attention. Made from ⅛ to 20 horse power.

Fig. 134.



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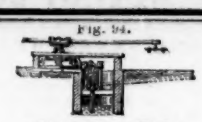
Extremely useful wherever water-power is available. The centrifugal pump is worked by gear from the water-wheel. Suitable for supplying country mansions with water. No expense when once fitted. Made of all powers.

Fig. 94.



GWYNNE & CO.'S IMPROVED BULLOCK OR HORSE POWER PUMPING MACHINERY.
For situations where steam, water, or wind power are not available. Portable, easy to erect, and not liable to get out of order. From 1 to 6 horse power.

Fig. 22.

GWYNNE AND CO.'S COMBINED STEAM-ENGINE AND PATENT CENTRIFUGAL PUMP.
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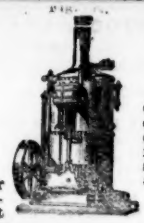
Fig. [illegible]

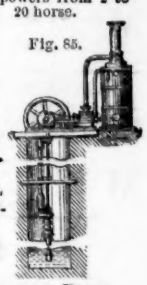


GWYNNE & CO.'S IMPROVED VERTICAL STEAM-ENGINE.
Occupies little space, compact, safe, and easy to work. Made from the very best selected materials. Of all powers from 2 to 20 horse.

Fig. 146.

GWYNNE & CO.'S IMPROVED HORIZONTAL HIGH-PRESSURE STEAM-ENGINE.
With or without expansion gear, for economical working. From 4 to 100 h. p.

Fig. 85.



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Worked direct by steam-engine at the mouth of the well. This arrangement is invaluable in situations where, from peculiar circumstances, the centrifugal pump is inapplicable.

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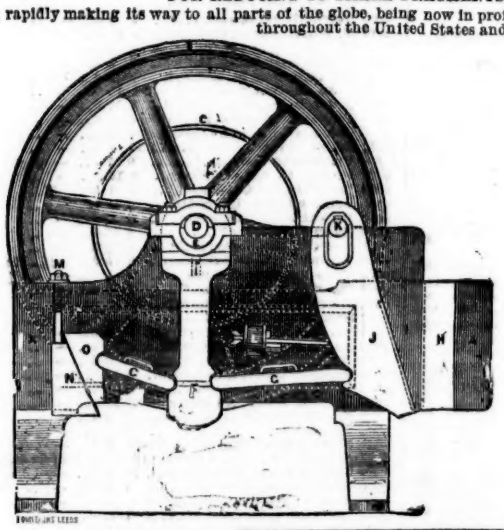

The Parys Mines Company, Parys Mines, near Bangor, June 6.—We have had one of your stone breakers in use during the last twelve months, and Captain Morcom reports most favourably as to its capabilities of crushing the materials to the required size, and its great economy in doing away with manual labour.
For the Parys Mining Company, JAMES WILLIAMS.
H. R. Marsden, Esq.

Ecton Emery Works, Manchester.—We have used Blake's patent stone breaker made by you, for the last 12 months, crushing emery, &c., and it has given every satisfaction. Some time after starting the machine a piece of the moveable jaw s about 20 lbs. weight, chilled cast-iron, broke off, and was crushed in the jaws of the machine to the size fixed for crushing the emery.
H. R. Marsden, Esq. —— THOS. GOLDSWORTHY & SONS.

Alkali Works, near Wednesbury.—I at first thought the outlay too much for so simple an article, but now think it money well spent. WILLIAM HUNT.

Welsh Gold Mining Company, Dolgelly.—The stone breaker does its work admirably, crushing the hardest stones and quartz. WM. DANIEL.

Our 15 by 7 in. machine has broken 4 tons of hard whinstone in 20 minutes, for fine road metal, free from dust. Messrs. ORD and MADDISON, Stone and Lime Merchants, Darlington.

Kirkless Hall, near Wigan.—Each of my machines breaks from 100 to 120 tons of limestone or ore per day (10 hours), at a saving of 4d. per ton.
JOHN LANCASTER.

Ovoca, Ireland.—My crusher does its work most satisfactorily. It will break 10 tons of the hardest copper ore stone per hour. WM. G. ROBERTS.

General Frémont's Mines, California.—The 15 by 7 in. machine effects a saving of the labour of about 30 men, or $75 per day. The high estimation in which we hold your invention is shown by the fact that Mr. Park has just ordered a third machine for this estate. SILAS WILLIAMS.

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MEADOW LANE, LEEDS,
ONLY MAKER IN THE UNITED KINGDOM.

CAUTION!

BLAKE'S PATENT STONE BREAKER,

In Chancery.

BLAKE v. ARCHER, NOVEMBER 12, 1867.

His Honour the Vice-Chancellor WOOD having found a VERDICT in FAVOUR of the PLAINTIFFS in the above Cause, establishing the VALIDITY of BLAKE'S PATENT, and made a DECREE for an INJUNCTION to RESTRAIN the DEFENDANTS, Messrs. THOMAS ARCHER and SON, of Dunston Engine-Works, near Gateshead-on-Tyne, from INFRINGING such PATENT, and ordering them to pay to the Plaintiffs the costs of the Suit.

ALL PERSONS are hereby CAUTIONED against MANUFACTURING, SELLING, or USING any STONE BREAKERS similar to BLAKE'S, which have not been manufactured by the Plaintiffs. Application will forthwith be made to the Court of Chancery for INJUNCTIONS AGAINST ALL PERSONS who may be found INFRINGING BLAKE'S PATENT after this notice.

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FLY WHEELS, DRIVING PULLEYS, AND DRUMS

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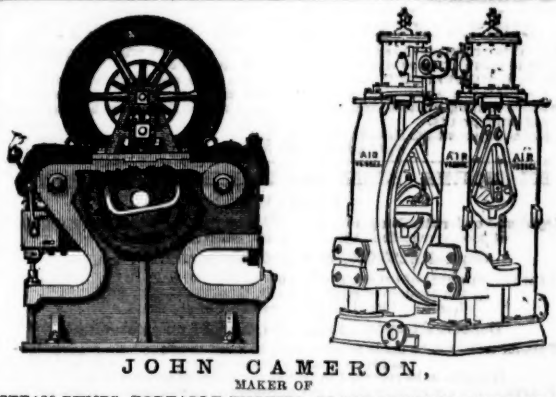
Obtained the PRIZE MEDALS at the "ROYAL EXHIBITION" of 1851; at the "INTERNATIONAL EXHIBITION" of 1862, in London; at the "IMPERIAL EXPOSITION" held in Paris, in 1855; at the "INTERNATIONAL EXHIBITION," in Dublin, 1865; and at the "UNIVERSAL EXPOSITION, in Paris, 1867.

BICKFORD, SMITH, AND CO., of TUCKINGMILL, CORNWALL, MANUFACTURERS of PATENT SAFETY-FUSE, having been informed that the name of their firm has been attached to fuse not of their manufacture, beg to call the attention of the trade and public to the following announcement:—

EVERY COIL of FUSE MANUFACTURED by them has TWO SEPARATE THREADS PASSING THROUGH the COLUMN of GUNPOWDER, and BICKFORD, SMITH, AND CO. CLAIM SUCH TWO SEPARATE THREADS as THEIR TRADE MARK.



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Address to the "Secretary," Institute of Anatomy, Birmingham.

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DR. WATSON (of the LOCK HOSPITAL), F.R.A.S., Member of the College of Physicians and Surgeons, on the SELF-CURE of NERVOUS and PHYSICAL DEBILITY, Lowness of Spirits, Loss of Appetite, Timidity, Incapacity for Exertion, &c., with means for perfect restoration. Free for 2 stamps by Dr. WATSON, No. 1, South-crescent, Bedford-square, London. Consultations daily from 11 till 2, and 5 till 8; Sundays, 10 till 1.
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WITHOUT MEDICINE.
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GOLD AND SILVER MINING.—All interested, or wishing to become so, in undertakings of this character, should read HANNAM and Co.'s JUNE CIRCULAR.
Investments may now be made on peculiarly favourable terms in Idaho and Nevada respectively, the richest gold and silver producing districts as yet discovered. The properties noted have been carefully selected and reported on by tried and well-known English agents, and will yield early returns.—Full particulars with JUNE CIRCULAR on application.
MISCELLANEOUS SHARES.—All investors with spare capital and capable of taking advantage of the opportunities afforded by a panic-stricken community, should make careful selections of shares now selling at far below their real value.
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Prospectuses and applications for shares may be made to the manager of the Bala Banking Company (Limited), Bala; or to the secretary, at the company's offices, in Manchester.

SOUTH MERLLYN MINE COMPANY.
A great improvement has taken place in this mine, which will very much enhance the value of the shares and the property altogether.
Mr. E. J. BARTLETT will be happy to forward upon application all particulars concerning this valuable property, which is situated in the centre of the Flintshire mining district, and surrounded by mines that have been and are making large profits.
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THE NORTH STAR GOLD MINING COMPANY (LIMITED).
Registered under the Companies Acts, 1862 and 1867, by which the liability of the shareholders is limited to the amount of their shares.
Capital £225,000, in 22,500 shares of £10 each,
Of which upwards of two-thirds, including the shares agreed to be taken by the vendors in part payment, have been applied for.
Shares will be allotted in the order of application.
Deposit £1 upon application, and £1 on allotment.
Further calls will be made as soon as an inspection of the mines has been made on behalf of the company.
Deposits to be returned in full in the event of no allotment.
Shareholders are to have the power of converting their shares, when fully paid-up, into transferable warrants.
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ABRIDGED PROSPECTUS.
This company is formed for the purchase and working of the mines known as the North Star Gold Mines, situated in Grass Valley, Nevada County, California, about 60 miles from Sacramento, the capital of California, and 12 miles from the Central Pacific Railroad.
The mines have been carefully inspected and reported upon by Prof. Silliman, who is considered as the highest authority upon these subjects in the United States; other reports and opinions have been given by Mr. Beckwith, Mr. Stangroom, Mr. Cronise, and Mr. J. A. Phillips and Mr. John Petherick, of London, which all concur in representing this mining property as one of great value and capabilities.
The Memorandum and Articles of Association, and the statement of Mr. Coulter; a report by the well-known engineer, Mr. David Forbes, F.R.S., &c., confirmatory of such statement, and of the reports therein referred to; a supplemental report by Mr. David Forbes, embracing private intelligence to himself in reference to the mines; the report by Mr. John Petherick, F.G.S., &c.; the bullion returns from the mines up to the close of the year 1868; together with surveys and plans of the mines, and other documents, and a large number of samples of the ores, may be seen at the office of the company.

THE NORTH STAR GOLD MINING COMPANY
(LIMITED).
APPLICATIONS FOR SHARES will be RECEIVED until TUESDAY EVENING, 23d February, when the LIST will be CLOSED.

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(LIMITED).
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This company has inaugurated a NEW PLAN of POPULAR ASSURANCE for miners, by forming a MINERS' SICK AND ACCIDENT FUND.
Policies will be issued without respect to age at a uniform quarterly premium of 3s.
Managers of mines and other public works are earnestly requested to appoint correspondents in each of their works for enrolling members.
Apply, for further information, to—
PERCIVAL HINDMARSH, Secretary.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Business.	Total divs.	Per share.	Last paid.
1500	Alderley Edge, *c*, Cheshire*	10 0 0	—		10 6 8	0 5 0	Jan. 1869
200	Botallack, *t. c*, St. Just	91 5 0	160	155 160	501 5 0	10 0 0	Feb. 1869
4000	Brookwood, *c*, Buckfastleigh	1 11 0	—		0 12 6	0 2 6	Aug. 1868
1000	Bronfloyd, *l*, Cardigan*	12 0 0	—		10 17 0	0 10 0	Jan. 1869
5094	Bwich Consols, *s-l*, Cardigan	4 0 0	—		0 5 0	0 5 0	June 1868
6400	Cashwell, *l*, Cumberland*	2 10 0	—		0 3 0	0 1 6	Aug. 1868
916	Cargoll, *s-l*, Newlyn	15 5 7	—		15 15 0	0 10 0	Jan. 1869
1280	Chanticleer, *l*	0 7 8	—		0 1 0	0 0 6	Nov. 1868
2450	Cook's Kitchen, *c*, Illogan‡	19 14 9	13½	12½ 13½	1 17 0	0 5 0	Jan. 1869
509	Creegbrawse and Penkevil, *t*	—	—		2 5 0	1 5 0	April 1868
867	Cwm Erfin, *l*, Cardiganshire*	7 10 0	—		29 13 0	0 10 0	Jan. 1869
128	Cwmystwith, *l*, Cardiganshire	60 0 0	—		383 10 0	2 0 0	Aug. 1868
280	Derwent Mines, *s-l*, Durham	300 0 0	—		177 0 0	2 10 0	July 1868
1024	Devon Gt. Consols, *c*, Tavistock†	1 0 0	—	280 300	1124 0 0	4 0 0	Jan. 1869
656	Ding Dong, *t*, Gulval‡	49 14 6	—	20 22	0 10 0	0 10 0	Sept. 1867
358	Dolcoath, *c, t*, Camborne	128 17 6	500	470 500	874 10 0	0 10 0	Feb. 1869
6144	East Caradon, *c*, St. Cleer†	2 14 6	8¾	8¾ 9	14 11 6	0 2 0	July 1867
300	East Darren, *l*, Cardiganshire	32 0 0	—		162 10 0	2 0 0	Nov. 1868
128	East Pool, *t, c*, Pool, Illogan	24 5 0	—		452 10 0	5 0 0	Jan. 1869
1906	East Wheal Lovell, *t*, Wendron	3 2 0	8½	8 8½	4 11 6	0 10 0	Jan. 1869
2800	Foxdale, *l*, Isle of Man*	25 0 0	—		72 10 0	0 10 0	Jan. 1869
5000	Frank Mills, *l*, Christow	3 18 6	4	3½ 4	3 9 6	0 4 0	Feb. 1869
3350	Gawton, *c*, Tavistock	3 10 6	—		0 3 0	0 3 0	Jan. 1868
15000	Great Laxey, *l*, Isle of Man*	4 0 0	20	18½ 19½	9 15 0	0 10 0	Dec. 1868
3000	Great Northern Manganese*	—	—		—	5 p.ct.	Feb. 1869
5908	Great Wheal Vor, *t, c*, Helston†	40 0 0	12	12 12½	13 16 0	0 5 0	Dec. 1868
1024	Herodsfoot, *l*, near Liskeard†	8 10 0	46	44 46	48 0 0	1 10 0	Oct. 1868
165	Levant, *c, t*, St. Just	10 8 1	—		1099 0 0	4 0 0	Jan. 1869
400	Lisburne, *l*, Cardiganshire	18 15 0	—		510 10 0	1 10 0	Nov. 1868
3000	Maes-y-Safn, *l*, Flint*	20 0 0	—	28 29	4 0 0	0 5 0	Oct. 1868
9000	Marke Valley, *c*, Caradon	4 10 6	9¼	9 9¼	4 19 0	0 5 0	Jan. 1869
3000	Minera Boundary, *l*, Wrexham*	1 0 0	—		0 13 0	0 3 0	Mar. 1866
1800	Minera Mining Co. *l*, Wrexham*	25 0 0	—		248 13 6	5 0 0	Feb. 1869
20000	Mining Co. of Ireland, *c, l, cl*	7 0 0	11⅞	11⅜ 11½	—	9 p.ct.	July 1868
40000	Mwyndy Iron Ore*†	3 5 0	—		0 11 6	0 3 0	Feb. 1869
200	Parys Mines, *c*, Anglesey*	50 0 0	—		162 10 0	2 10 0	Aug. 1868
5000	Penhalls, *t*, St. Agnes	3 0 0	—		0 2 6	0 2 6	Jan. 1869
12800	Prince of Wales, *t*, Calstock	0 12 6	26s.		0 8 6	0 1 0	Nov. 1868
1120	Providence, *t*, Uny Lelant†	10 6 7	37½	35 37	86 12 6	1 0 0	Dec. 1868
512	South Caradon, *c*, St. Cleer†	1 5 0	375	360 380	607 10 0	5 0 0	Jan. 1869
6000	South Darren, *l*, Cardigan*	3 6 6	—		0 13 0	0 1 6	Nov. 1868
937	South Wh. Crofty, *c*, Illogan	24 10 10	15	13½ 14	1 10 0	0 10 0	Feb. 1869
496	So. Wh. Frances, *c*, Illog.†‡	18 18 9	17	15 17½	374 13 6	1 0 0	Mar. 1868
508	Summer Hill, *l*, Mold	3 18 6	—		2 5 6	0 5 0	Feb. 1868
6000	Tincroft, *c, t*, Pool, Illogan†	9 0 0	18	17 17½	20 1 0	5 0 0	Nov. 1868
2000	Trumpet Cons., *t*, Helston	11 10 0	19	18 20	8 0 0	0 10 0	Jan. 1869
3000	W. Chiverton, *l*, Perranzabuloe†	10 0 0	54	54 55	31 7 6	2 0 0	Nov. 1868
5000	West Godolphin, *t, c*, Breage	0 1 0	—		0 2 0	0 2 0	Dec. 1867
400	W. Wheal Seton, *c*, Camborne†	47 0 0	205	190 200	622 0 0	6 0 0	Feb. 1869
512	Wheal Basset, *c*, Illogan†	5 2 6	75	69 71	632 10 0	1 0 0	June 1868
1024	Wheal Friendship, *c*, Tavistock	20 0 0	—		300 10 0	0 10 0	Nov. 1866
512	Wheal Jane, *s-l*, Kea	10 15 0	47½	45 50	21 0 0	2 0 0	Nov. 1868
4295	Wheal Kitty, *t*, St. Agnes	5 4 6	4¼	4 4¼	3 11 0	0 2 0	Nov. 1868
1024	Wheal Mary Ann, *l*, Menheniot†	8 0 0	22	21 22	66 17 6	0 17 6	Dec. 1868
80	Wheal Owles, *t*, St. Just‡	70 0 0	—		350 13 0	7 10 0	Feb. 1868
396	Wheal Seton, *t, c*, Camborne	58 10 0	80	70 75	254 15 0	2 0 0	Feb. 1868
3000	Whitewell Lead, Clitheroe*	0 5 0	—		1 0 0	0 10 0	Dec. 1867
17000	Wicklow, *c, t*, Wicklow	2 10 0	11⅞	11⅜ 11½	49 1 0	0 5 0	Oct. 1868

FOREIGN DIVIDEND MINES.

25000	Alamillos, *l*, Spain*†	2 0 0	1¾	1½ 2	0 4 6	0 2 0	Sept. 1868
20000	Australian, *c*, South Australia‡†	7 7 6	—		0 1 6	0 0 6	Aug. 1868
15000	Cape Copper Mining*†	7 0 0	14		3 17 6	0 15 0	Nov. 1868
30000	Central American Association*†	1 10 0	—		—	—	
76162	Don Pedro North del Rey*†‡	0 14 0	4⅜	4¼ 4½	1 0 3	0 3 6	Nov. 1868
70000	English and Australian, *c*‡	2 10 0	—		—	0 1 0	Feb. 1868
25000	Fortuna, *l*, Spain*†	2 0 0	—	1½ 2	1 11 10	0 2 6	Sept. 1868
20000	Gen. Mining Assoc., Nova Scotia†	20 0 0	—		23 10 0	0 15 0	June 1867
10000	Gonnesa, *l*,*	5 0 0	—		10 per cent.		Aug. 1868
68000	Kapunda Mining Co., Austra†‡	1 0 0	—		0 1 10	0 0 6	Nov. 1868
15000	Linares, *t*, Spain*†	3 0 0	3½		11 15 0	0 3 4	Sept. 1868
50000	Panulcillo, *c*, Chili*†	3 0 0	1½		10 per cent.		Yearly.
6000	Peel River Land and Mineral*†	100 0 0	36		—	—	
10000	Pontgibaud, *s-l*, France†	20 0 0	—		5 6 2	0 19 7	Dec. 1868
100000	Port Phillip, *g*, Clunes†	1 0 0	2	1⅞ 2	1 1 6	0 1 6	Jan. 1869
120000	Scottish Australian Min. Co.†	1 0 0	1		10 per cent.		Nov. 1868
11000	St. John del Rey, Brazil*†	15 0 0	18	18½ 19½	81 10 0	4 5 0	Dec. 1867
4000	Swedish Sulphur Ore*	2 10 0	—		7½ per cent.		Dec. 1868
13500	Vancouver Coal Mining*†‡	6 0 0	8¼	7 7½	2 2 6	0 12 0	Nov. 1868
50000	Victoria (London) [25000 £1 pd., 25000 12s. 6d. pd.]				0 9 7	0 0 7	July 1868
40000	West Canada Mining Co.*	1 0 0	—		0 19 6	0 2 6	May 1866

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
50000	Anglo-Argentine, *s*, Argentine Republic*	1 0 0	—		
100000	Anglo-Brazilian, *g*†	0 10 0	⅛	⅜ ½	Nov. 1866
12500	Anglo-Italian, *g*†	0 10 0	¾	⅞ ⅞	Jan. 1868
20000	Australian United, *g*	1 0 0	—		Mar. 1868
2464	Burra Burra, *c*, South Australia‡	5 0 0	—		
20000	Capula, *s*, Mexico*†	1 17 6	—	1⅛ 1⅜	May 1868
30000	Chontales, *g, s*, Nicaragua*†	5 0 0	1¼	1¼ 1½	Mar. 1868
12000	Cobre Copper Company, *c*, Cuba†‡	45 10 0	—		Jan. 1868
10000	Copiapo Mining Company, Chili†‡	16 10 0	—		
10000	Copiapo Smelting, Chili*	10 0 0	—		April 1866
300	Copper Miners' Co. of South Australia* [150 £100 pd., 150 £70 pd.]				Nov. 1866
15000	El Chico Silver Mining and Reduction Company*	5 0 0	—		Nov. 1866
40000	Fortune Copper Mining Co. of Western Australia	2 0 0	—		Fully pd.
50000	Frontino and Bolivia, *g*, New Granada*†	1 17 6	½	8s. 10s.	May 1868
150000	General Brazilian*	0 5 0	—	7s. 9s.	
80000	Great Northern, *c*, South Australia†	1 11 6	—		Sept. 1862
50000	Javali, *g*, Nicaragua	2 0 0	—		Jan. 1869
7927	Lusitanian (Portugal)†‡	2 15 0	—		Dec. 1866
83640	Mariquita, *g, s*, New Granada	1 0 0	—		Feb. 1868
12500	Nerbudda Coal and Iron, India*†	6 0 0	—	2¾ 3¼	Dec. 1867
51000	New Quebrada, *c*, Venezuela*†	4 4 0	—		
80000	Pestarena United, *g*, Italy*†	2 17 6	1⅝	1⅜ 1⅝	
10178	Rhenish Consolidated, *l* [6000 £5 pd., 4178 £2 10s. pd.]	—	—		May 1866
100000	Rossa Grande, *g*, Brazil*†	0 14 0	1¼	1 1¼	June 1867
15000	San Pedro del Monte, *s*, Mexico*	4 0 0	—		Sept. 1866
10000	San Roque, *l*, Spain	5 0 0	—		Fully pd.
50000	Sao Vicente, Brazil*†	0 4 0	—		Oct. 1868
100000	Taquaril, *g*, Brazil*	0 7 6	⅝	12s. 14s.	Oct. 1868
43174	United Mexican, *s*, Mexico†‡*	28 5 2	—	1¾ 2	May 1868
30000	Val Antigoria, *g*, Italy*	1 2 6	—		
6000	Val Sassam, *s, c, l*, Italy*†	8 0 0	—		Aug. 1868
45000	Victor Emanuel, *c*, Italy*	1 0 0	—		Fully pd.
20000	Washoe, *g*, Nevada†	5 0 0	—		Fully pd.
80000	Worthing, *c*, South Australia*†	1 0 0	—	¼ ⅜	Fully pd.
75000	Yorke Peninsula, South Australia	1 0 0	—		Fully pd.
45000	Yudanamutana, *c*, South Australia*†‡	3 0 0	2⅛	1⅞ 2⅛	Fully pd.

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
12000	Brynpostig, Montgomery, l*	1 0 0	—		
1000	Carn Brea, *c, t*, Illogan‡	30 0 0	20	18 20	June 1868
3000	Chiverton, *l*, Perranzabuloe	11 0 0	3	2¼ 2¾	Nov. 1868
3000	Chiverton Moor, *l*, Perranzabuloe	6 13 6	4¼	4⅛ 4⅜	Nov. 1868
2880	Clifford Amalgamated, *c*, Gwennap‡	40 17 6	—		Oct. 1868
12800	Drake Walls, *t*, Calstock‡	2 10 0	⅞	16s. 18s.	Jan. 1868
512	East Basset, *c*, Redruth†‡	37 0 0	8	5 7	Nov. 1868
6000	East Carn Brea, *c*, Redruth‡	4 6 0	3½		Feb. 1869
6000	East Grenville, *c*, Camborne	4 4 0	3⅜	3¾ 4	Feb. 1869
4000	East Wheal Russell, *c*, Tavistock†	13 13 6	—		Oct. 1868
6144	Gonamena, *c*, St. Cleer	7 14 3	—	1 1¼	Feb. 1869
5000	Great North Downs, *c*, Redruth	6 13 0	2¼	1¾ 2	Feb. 1867
4800	Great Retallack, *s-l, b*, Perranzabuloe	2 19 6	2¾	2¼ 2½	Oct. 1868
5143	Great South Tolgus, *c*, Redruth	1 10 6	—		Dec. 1868
1798	Great Wheal Fortune, *t*, Breage	31 7 4	—		Mar. 1868
6000	Hingston Down, *c*, Calstock†	5 12 0	—		Dec. 1868
400	New Wheal Seton, *c*, Camborne	63 0 0	71	70 75	Jan. 1869
3457	North Downs, *c*, Redruth	5 8 10	—		Jan. 1868
695	North Roskear, *c*, Camborne	61 19 0	—	6 8	Jan. 1869
5936	North Treskerby, *c*, St. Agnes	1 13 10	1	18s. 20s.	Feb. 1869
3000	North Wheal Chiverton, *l*, Perranzabuloe	4 10 0	—		Nov. 1868
1024	Rose and Chiverton United, *l*, Newlyn	6 10 0	6¾	6½	Jan. 1869
6138	South Condurrow, *t, c*, Camborne	4 10 6	1	22s. 24s.	Feb. 1869
1000	South Merilyn, *l*, Flint	1 0 0	—		
940	St. Ives Consols, *t*, St. Ives‡	10 15 0	13	12 13	Nov. 1867
920	Stray Park, *c, t*, Camborne†‡	45 5 8	6	5 6	April 1868
1000	West Basset, *c*, Illogan†‡	2 0 0	—		May 1868
1024	West Caradon, *c*, St. Cleer‡‡	25 0 0	3	2½ 3	Nov. 1868
12800	West Drake Walls, *c*, Calstock	0 7 6	—	⅜ ½	Jan. 1869
2582	West Great Work, *t*, Breage	5 11 0	3¼		June 1866
6000	West St. Ives, *t, c*, St. Ives	0 3 6	—	¼ ½	Oct. 1868
512	West Wheal Frances, *t*, Illogan	106 15 0	43	43 45	
5000	West Wheal Kitty, *t*, St. Agnes	3 4 0	—	⅝ ⅝	Nov. 1868
6000	Wheal Agar, *c*, Illogan	7 15 0	1¼	1 1¼	Jan. 1869
512	Wheal Buller, *c*, Redruth†‡	29 10 0	—		Feb. 1869
811	Wheal Emily Henrietta, *c*, Illogan	20 15 0	22		Jan. 1869
5724	Wheal Grenville, *c*, Camborne†	10 10 0	2	44s. 46s.	Dec. 1868
1040	Wheal Trelawny, *s-l*, Liskeard†	10 7 0	3	8 9	Dec. 1867
4096	Wheal Uny, *t, c*, Redruth	10 14 6	3⅝	3⅜ 3⅝	Oct. 1868

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Bus. done.	Last Call.
	NON-DIVIDEND MINES.				
4000	Ballacorkish, I. of Man, *l, c**	4 0 0	—		
4000	BedfordConsols, *c*, Tavistock	3 0 6	¾	½ ¾	
4000	Bedford United, *c*, Tavist.*	2 17 8	2¼		
1248	Boscaswell, *t, c*, St. Just	7 6 0	—		
5000	Bottle Hill, *t*, Plympton	1 14 6	—		
12000	Bradda, *c, l*, Isle of Man*	1 10 0	—		
5000	Bryn Gwiog, *l*, Flint	0 18 0	—		
1200	Bryn Gwyn, *l*, Mold*‡	9 0 0	—		
7500	Brynystwith, *l**	1 10 0	—		
1000	Budnick Consols, *c*	2 5 0	—		
6000	Bwadrain Cons., *s-l*, Cardig.	3 2 0	—		
30000	Caldbeck Fells, *l*, Cumberld.*	1 17 6	—		
1000	Camborne Consols, *c*	11 10 0	—		
11000	Cape Cornwall, *t, c** [8000 £2 10s. pd., 3000 25s. pd.]				
5000	Capel Banhaglog, *l*, Mont.*	2 0 0	—		
914	Caradon Consols, *c*, St. Cleer	3 13 6	—		
1000	Cardynham China-clay*	3 0 0	—		
6000	Carn Camborne, *c*, Cambrn.	2 10 6	—		
20000	Carysfort [3200 £2½ pd., 16800 £1 ½ p l.]				
16000	Central Snailbeach *l**	1 0 0	—		
3000	Chiverton Valley, *l*, Perranz.	2 0 0	—		
2048	Colquite & Callington Un., *c*	1 3 0	2¾	2½ 2⅝	
256	Condurrow, *c, t*, Camborne†	76 10 0	—		
50000	Connorree, *c, sul*, Wicklow*	1 0 0	—		
983	Copper Hill, *c*, Redruth‡	12 10 0	—		
1000	Cornwall Hematite Co.*	5 0 0	—	6½	7½
1055	Craddock Moor, *c*, St. Cleer‡	14 6 0	—		
12000	Crelake, *c*, Tavistock	3 12 0	—		
6000	Cuddra, *t*, St. Austell	5 10 0	—		
300	Cwm Darren, Cardigan*	—	—	42½	40 42½
5000	Dolwen, *l*, Cardiganshire	0 10 0	—		15s.
740	Eaglebrook, *l*, Talybont*	19 15 0	—		
1000	East Basset and Grylls, *t*	3 5 0	—		
4000	East Chiverton, *l*, Perranz.	3 6 3	1¾	1½	1¾
4000	E. Gunnislake & S. Bed. c.	11 1 6	—		
6000	East Laxey, *l*, Isle of Man	3 0 0	—		
4096	E. New Wh. Lovell, *t*, Wend.	0 5 0	⅝	½	⅝
3986	East Providence, *t*, Lelant	—	—		
5000	E. Rosewarne, *c, t*, Gwinear	2 19 0	—		
6000	East Snaefell, *l*, I. of Man*	3 0 0	—		
5610	East Seton, *c*, Camborne	0 16 6	1	18s.	20s.
2000	East Trumpet, *c, t*	1 15 0	2⅛	2¼	2½
6000	East Wheal Reeth, Lelant	—	—		
6000	Ebury Lead Min. Co., Flint*	2 10 0	—		2 2¼
1026	Garden, *c*, Morvah	6 15 3	—		
6000	Gen. Min. Co. for Ireland, *c*	5 10 0	—		
40000	Glasgow Caradon, *c** [30,000 £1 p., 10,000 15s. p.]				
10000	Glan Alun, *l*, Mold*	0 12 0	⅛	12s.	13s.
5700	Goginan, Cardigan, *l*	12 10 0	—		
486	Grambler & St. Aubyn, ct‡	74 0 0	—		
10000	Great Cwmsymlog, *s-l**	1 15 0	—		
2866	Great Caradon, *c*, St. Ive	4 5 9	¾		⅝
12500	Gt. No. Laxey (Isle of Man)*	1 0 0	1⅛	⅛	¾
6000	Great N. Telgus, *c*, Illogan	1 0 0	—		
15000	Great Rhosesmor, *l*	5 0 0	—		
6000	Gt. S. Chiverton, *s-l*, Perranz	2 0 0	—		1¾ 2
6000	Great Western, *t*	2 0 0	—		
3313	Gt. Wh. Baddern, *t*, Devoran	7 17 6	—		
119	Great Work, *t*, Gerrnoe	100 0 0	—		
10240	Gunnislake (Clitters'), *t, c*	4 19 0	—		
6068	Gwydyr Park, *l*, Llanrwst	1 11 0	—		
6400	Harwood, *l*, Durham*	0 7 6	—		
5000	Ironmasters' Company*	0 10 0	—		14 15
1019	Leeds and St. Aubyn, *t, c*	19 13 4	—		
1000	Llywernog, *l*, Cardiganshire	13 0 0	—		
5120	Lovell Consols, Wendron, *t*	0 6 0	1⅛	¾	1
6000	Maudlin, *c*, Lostwithiel	4 7 0	—		
6000	Mid-Wales, *l,**	2 10 0	—		
4662	Minera Union, *l* [2500 £4 pd., 2162 £2 5s. pd.]				
1000	Montgomeryshire, *l*, b*	3 0 0	—		
640	Mount Pleasant, *l*, Mold	4 0 0	—		
1024	Nangiles, *t, c*, Kea	33 12 0	—		12
1500	New Chiverton, *l*, Perranz	1 4 6	—		
6000	New Clifford, *c*, Gwennap*	3 0 0	—		
6400	N. Crow Hill, *l*, St. Stephen	3 6 6	—		
26514	New E. Bussell, *c*, Tavistock	0 12 6	—		
0000	New Gt. Cons., *c*, Tavistock*	1 0 0	—		
6400	New Pembroke, St. Blaz. *t, c*	1 12 0	—		
6000	New Westminster, *l*	6 0 0	—		
4096	New Wh. Lovell, *t*, Wendron	1 19 6	3		2⅜ 2⅝
2000	N. Wh. Towan, *c, t*, Wendron	1 10 0	—		
5000	No. Dolcoath, *c*, Camborne	4 3 0	—		
1361	No. Grambler, *c*, Redruth	9 3 9	—		
6000	North Jane, *t, s-l*, Kenwyn	3 6 0	¾	⅝	⅞
2000	North Levant, *t, c*, St. Just	10 12 0	11⅛		11 11½
4000	No. Phœnix, *c*, Linkinhorne	4 11 0	—		
3240	North Pool, *c*, Illogan	6 3